

Marine Corps Gazette

JUNE 1953

THIRTY CENTS



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THE MARINES' AMPHIBIAN

Marine Corps Gazette

JUNE 1953

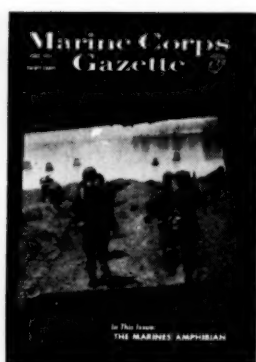
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COVER

That thud you just heard was the ramp of the LVT as it dropped a split-second before the Marines charged to deploy around it and move out of the beachhead. Originally developed to negotiate the Florida swamps, the "Marines' Amphibian" has come a long way since the first model was demonstrated at Quantico in 1940. The illustration is from a color transparency made for the Marine Corps by Hans Knopf. Don't let the color of the utility uniform the Marines are wearing worry you. It's caused by a quirk of color photography which emphasizes the blue in green under certain lighting conditions.

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message center

In Defense of History

Dear Sir:

Let me add the following to your comment in answer to Capt Roe's blast relative to running articles of historical nature. Most all of the great captains were avid military history students and studied in detail the campaigns of the greats who preceded them.

For example: Hannibal was a student of Alexander and the Romans all learned from Hannibal. The brilliant Charles XII of Sweden studied Alexander's campaigns in detail. Nathaniel Greene, raised as a non-fighting Quaker, studied the works of Turenne and turned out second to Washington himself as a Revolutionary commander. Napoleon, greatest of them all, was an avid student of other commanders and liked in particular Washington's Trenton-Princeton campaign. General Jackson (Stonewall, that is) rode with three books in his saddlebags, one of which was Napoleon's *Maxims*. The late Erwin Rommel was in turn a student of Stonewall Jackson and studied that worthy's Valley Campaign of '62 in detail.



The above examples are only a few, but it may help to prove the point that the study of military campaigns of the past gave other leaders the imagination, inspiration, and example to plan and execute decisive campaigns of their own and thus become better leaders.

CHARLES V. CRUMB
MSgt, USMC

Camp Pendleton, Calif.

Dear Sir:

Bein' just as Irish as Capt Patrick C. Roe, it would be timorous of me not to pick up the gauntlet which he threw down in his letter, "More Tactics Less History" in the March *Gazette*.

... The biographies of great military leaders from Napoleon to Patton bear eloquent testimony to the value of the study of military history. That this is the view of the majority of Marines is indicated by the widespread interest aroused some time ago by the *Gazette's* publication of a recommended list of military reading.

To study only the day-to-day problems of the present, without viewing them as part of the broad and meaningful fabric of historic human experience is, I think, to prefer a match to the light of the sun.

WILLIAM V. KENNEDY
2dLt, USAF

Denver, Col.

"Just Fine, Sir"

Dear Sir:

... My story starts 18 March when getting ready for a company-size raid. We were seated on a rice paddy getting our last briefing by our captain. Later, Gen Pollock spoke to us, which I know made many of us feel better and ready to fight. The raid turned out pretty well, although many of us got hurt. A few days later, not even thinking

of seeing the general again, to my great surprise he was standing right by my bed. I was so surprised I could not say what I wanted but answered, "Just fine, Sir," when he asked how I felt. It's a great feeling to see our general in the field or in the hospital.

So if there is any way to put in your next issue that B Co, 5th Marines thanks him for taking time to see the troops both in the field and in the hospital, please do so.

JEAN F. ADRIASSIE
Pfc, USMC

USS *Haven*

On "Fox Hill"

Dear Sir:

Capt McCarthy's *Fox Hill* in the March issue is the finest article in months to appear in the *Gazette*. His simple account of an epic defense is vivid and lucid. It is a model for all military writers.

P. A. DAVIS
Capt, USMC

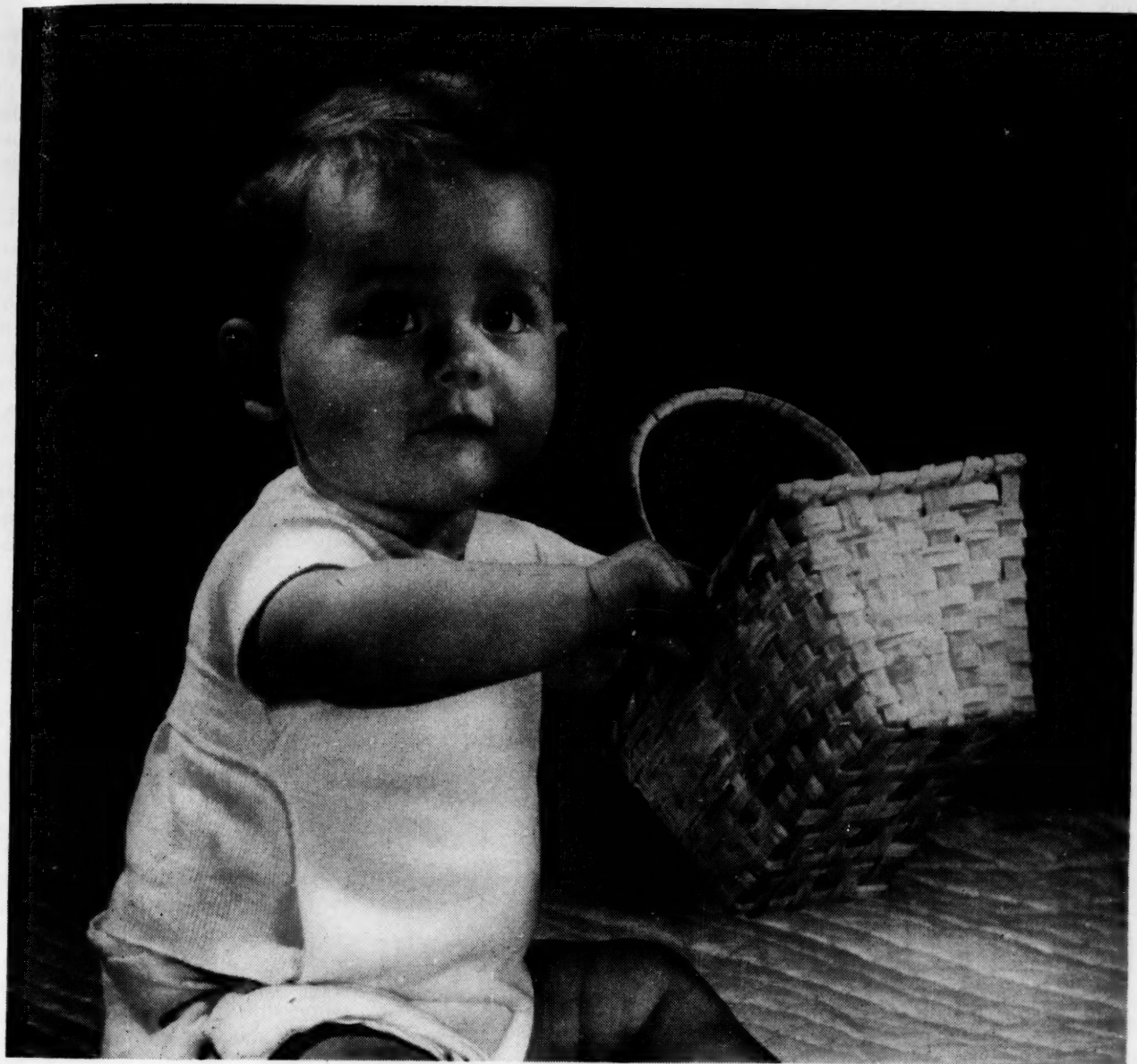
Quantico, Va.

Dear Sir:

Enjoyed Capt McCarthy's article *Fox Hill* in the March issue. A small point of correction: Capt McCarthy's article overlooked the fact that gallant H Co, 3/7, accompanied 1/7 and joined H&S and F in bedding down within the Fox Co perimeter.

M. P. NEWTON, JR.
Capt, USMC
Brooklyn, N. Y.

Each month the *Gazette* pays five dollars for each letter printed. These pages are intended for comments and corrections on past articles and as a discussion center for pet theories, battle lessons, training expedients, and what have you. Correspondents are asked to keep their communications limited to 200 words or less. Signatures will be withheld if requested; however, the *Gazette* requires that the name and address of the sender accompany the letter as an evidence of good faith.



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Recruiters' Problems

Dear Sir:

I read with interest Captain Piehl's article *They Know the Score* and, for the first time, have a fair idea of how the present-day system of promotions for the Corps works.

According to the article, the main function of the promotion tests, both the GMST and TT, is to determine how well a man knows his job with respect to all other men of the same rank and MOS. Therein lies the basis of my complaint, and I am sure

there are many other fellow Marines in the same boat as myself.

I am a career Marine and have no desire to remain a staff sergeant for the rest of my thirty. Yet in order to be promoted I must compete against all other Marines of the same rank and MOS, many of whom are working day in and day out in their functional fields, while I have been away from mine for almost three years.

True, I can study on my own—using the various manuals and other training aids available to most of us. However, I don't believe that

any Marine away from his functional field for a long period of time can compete on an equal basis with other Marines who are performing duty in their assigned functional fields, regardless of how much he studies on his own.

I realize that the system has to be based on the Corps as a whole, but I do believe that some arrangement could and should be made for the many Marines presently assigned to duty away from their functional fields and, in many cases such as myself, away from the Marine Corps.

Now for some good news. We here on recruiting duty in Salt Lake City, look forward each month to the arrival of your very fine magazine, and believe me when I say it is read from cover to cover by all hands.

R. A. WARFIELD
SSgt, USMC

Salt Lake City, Utah

Information Please

Dear Sir:

... I think it would be interesting and educational to get some articles or letters from your readers on special foreign duty, recruiting duty, different staff sections in high echelons, other type duties, and information about duty stations that most of us know little about. Capt Piehl's *They Know The Score* is in line with what I mean. I think such articles and letters would help senior NCOs in answering questions from their men about duty and stations.

JOHN F. MEYERS
MSgt, USMC

Joliet, Illinois

ED: We agree with MSgt Meyers. Such articles would be consistent with the Gazette's editorial policy and the editors would like to see a few submitted.

Dollars and Cents Reaction

Dear Sir:

Congratulations to MSgt R. A. Brasier on his "first try at writing anything" (*Tell 'Em What It Costs* in the March issue).

The sergeant certainly hit a subject that is definitely a problem to commanding officers and troop leaders in the Marine Corps. Only too often in the past I have found that the man who "goes over the hill"

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hasn't been concerned with the consequences; his mind is just concerned with the situation at hand. Perhaps by letting the man see the results in dollars and cents, he will hesitate before taking off on his unauthorized trip.

B. W. DOLMAN
2dLt, USMC

Quantico, Va.

Re-Pack Plaudits

Dear Sir:

I read with interest *Re-Pack Your*

Troubles by Capt Verle E. Ludwig (March 1953) and, as an 0302, please allow me to congratulate Capt Ludwig for hitting the nail right on the head.

For my money the packboard rates right up there with the thermo boot as "good issue."

DAVID D. FINNE, JR.
1stLt, USMC

Seal Beach, Calif.

Dear Sir:

Thank you for your article by Capt Verle E. Ludwig entitled *Re-*

Pack Your Troubles. This was the most useful article in the whole issue of the *March Gazette*.

... I only hope that someday soon a decision will be made to adopt either of the two other styles or a wholly new pack.

Our regiment has been specializing in night training and it is true that many hours spent in preparing ... blanket-roll packs could have been saved for ... tactical use if we had rucksacks.

GEORGE L. STACKHOUSE
Sgt, USMC

Camp Pendleton, Calif.

Dear Sir:

I certainly was pleased to pick up the *March* issue and find ... *Re-Pack Your Troubles*, which I read with great satisfaction and agreement. The suggestion of using three packs meets with my most hearty approval. On only one point do I disagree—that is, I have not ended up with my cartridge belt around my solar plexus, but practically around my throat.

The rucksack and packboard are most certainly the answer to this perplexing problem. Both have been tried and used by men who have lived out in the open and know the capabilities of each of these packs and they consistently use them. So what do you say Equipment Board? Let's adopt these packs as standard Marine Corps issue, and I'm sure you'll have a lot of much happier "gravel-crunching" Marines in the field.

THOMAS A. SIMPSON
1stLt, USMC

University of Alabama

Dear Sir:

... Let us throw the blanket roll and shelter-half out the porthole. The sleeping bag is the thing! I am sure it can be developed with straps, pockets, etc. The sleeping bag can be used for a pack. One can get a lot of gear inside and still sleep in it ... Let's push the sleeping bag and all its advantages.

GORDON R. RENSHAW
TSgt, USMC

El Toro, Calif.

The Will to Win

Dear Sir:

Maj Haynes' excellent article, *Left Flank at Iwo*, was read with more

Jos. A.

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than a passing interest. The day the 28th Marines moved up to go into the attack in the north of Iwo is well remembered. We of the 26th, with our companies whittled down to fifty percent of fighting strength, had been relieved that morning by the 27th Marines, just short of Hill 362. As the "Flag Raisers" went by, many a beat-up survivor of the approaches to Hill 362 called out, "Better deep-six the souvenirs. It's gonna be rough where you're heading!" Less than twenty-four hours later we were back in the lines again on the right flank of the 28th, and it *was* rough. . . all the way!

In his last paragraph Maj Haynes brings to light a subject too little discussed, and one that can bear much serious thought. There does exist a dangerous tendency towards becoming "support dependent" in our service. Ten months in Korea, spent during the winter, spring, and summer campaigns of 1951, illustrated this tendency clearly. Platoon leaders hesitated to move out in the attack without mortar preparation. Commanders of companies and battalions shuffled around and dragged their feet until a heavy volume of mortar or artillery fire could be placed on hills and ridges in the zone of action . . . regardless of whether these terrain features were occupied

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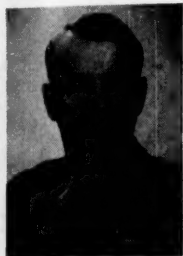
or not. There is no quarrel with doctrine, and I agree, as does Maj Haynes, that the coordinated use of supporting arms should be employed where feasible. Let's not, however, forget that no amount of supporting fires can or will win the fight for us, particularly if our troop leaders are allowed to become over-dependent on them. If this is allowed we may well lose that intangible something that has always served the Marine Corps so well . . . *the will to win!*

GERALD P. AVERILL
Maj, USMC

Quantico, Va.

Our authors

✦ In *The Marines' Amphibian*, (page 40) **LtCol Victor J. Croizat** has developed a warm, human history of the LVT. His admiration and respect for the tracked vehicle was developed quite naturally through his association with it as CO of amtrack battalions through most of the island campaigns in the Pacific during World War II. LtCol Croizat is a graduate of Syracuse University, Basic School, the Command and Staff Course, MCS, and the Ecole Supérieure de Guerre. His last article for the *Gazette* was *Amphibian With a Future* in the February issue.



LTCOL CROIZAT

✦ We weren't able to discover whether the Brigadier Johnson **Capt James R. Johnson** writes about in *Morgan's Men* (page 36) was a relative or not, but we did find that Capt Johnson is a prolific writer who has had about thirty articles and stories published. This is his third in the *Gazette*. Capt Johnson entered the Marine Corps in 1942 and has been associated with Marine air wings in liaison and intelligence capacities for the greater part of his Marine Corps career, most recently as Asst S-2 of MAG-12 in Korea. He is now attending Junior School at Quantico.



CAPT JOHNSON

✦ If you're headed for Korea, you stand a good chance of running into **LtCol Thomas M. Coggins** who wrote *Replacements Are Coming!* (page 50). LtCol Coggins is CO of the 2d Replacement Bn, Camp Pendleton. He enlisted in the Marine Corps in

1935 and entered the Naval Academy after a tour of sea duty as a private on the USS *Brooklyn*. Since returning from Korea, where he served as S-4 of the 11th Marines, LtCol Coggins has attended the Field Artillery Officers' Advanced Course, Ft Sill.



LTCOL COGGINS

✦ **LtCol R. D. Taplett** and **Maj R. E. Whipple** collaborated on *Darkhorse Sets the Pace* (page 14). LtCol Taplett, who is now Academic Supervisor of Basic School, MCS, was CO of the 3d Bn, 5th Marines during the period covered by the story. He is a graduate of the Command and Staff School, Ft Leavenworth, and his

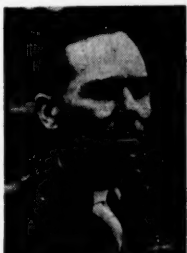


LTCOL TAPLETT



MAJ WHIPPLE

personal decorations include the Navy Cross, the Silver Star with two stars, and the Legion of Merit and the Bronze Star, both with Combat "V." Maj Whipple, who rates four battle stars on his World War II ribbons, attended the University of Oslo (Norway) and Springfield College before enlisting in the Marine Corps in 1941. Prior to his present assignment at the Marine Corps Development Center, Maj Whipple was PIO of the Marine Corps Reserve District, Boston, Mass.



COL HUDSON

✦ Presently assigned duty as an assistant to the Joint Chiefs of Staff,

Col Lewis C. Hudson wrote *An Armistice Can Work* (page 55), after he returned from the Far East and duty with the UN over there. Col Hudson is a graduate of the Naval Academy, Basic

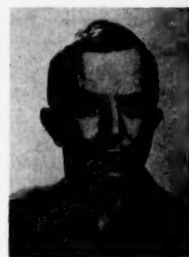
School, the Command and General Staff School, Ft Leavenworth, and the National War College. This is his third article for the *Gazette*.

✦ **Col Henry R. Paige** who compares the helicopter with other means of transportation in *They Hold Their Own* (page 10), has written for the *Coast Artillery Journal* and other military publications in addition to the *Marine Corps Gazette*. A graduate of the Naval Academy, the Junior Course of MCS, and the National War College, Col Paige's service in the Marine Corps runs from as far back as the Nicaraguan campaigns. He is currently the Director of the Marine Corps Development Center.



COL PAIGE

✦ "On Target" With *Comanche* (page 24) was co-authored by **MSgt Albert F. Hoffman** and **SSgt Donald J. McCarthy**. At press time we hadn't heard from SSgt McCarthy, but we tracked MSgt Hoffman down to the 3d Marine Division where he is first sergeant of a rifle company. A Marine parachutist in his earlier days in the Corps, MSgt Hoffman will soon sew on his fourth hashmark. His dozen-or-more ribbons are topped by the Bronze Star with Combat "V."



LTCOL ALDRIDGE



MSGT HOFFMAN

✦ **LtCol Frederick S. Aldridge** who wrote *Fight In A Tactical "T"* for our January issue has given us something else to think about. For this issue he has penned *Principles of War: Checklist For a Landing* (page 28)—a good solid chunk of tactical reasoning presented in fictional style. LtCol Aldridge completed the Senior Course at Quantico in 1951 and is now an instructor in the tactics section of the Marine Corps Educational Center's Senior School. **USMC**

By Col H. R. Paige



THEY HOLD T

• HOW VULNERABLE ARE HELICOPTERS? We hear all sorts of arguments from, "They can be shot down like ducks" to "They can dodge anything." Somewhere between these extremes lies the correct answer. Let's see if we can make a logical analysis of the problem.

Let's take the duck-shooting side. The proponents of vulnerability will say:

1. Too slow.
2. Too big a target.

3. Can be seen a long way off.

4. Can't defend itself.

5. Hit a rotor blade and down she comes.

Now let's get a common ground for comparison. What is the principal purpose of the helicopter? It is a means of transportation. Therefore, in our analysis it should be compared to other means of transportation.

Looking around at these other means of transportation, we find



Where does the helicopter fit into the combat

picture? Is it a magic carpet or a sitting duck?

THEIR OWN

landing craft, amphibious vehicles, motor vehicles (trucks of various sizes), and fixed-wing transport aircraft. There are others but these are the ones most commonly used by the landing force in amphibious operations. All of these are either unarmored or very lightly armored, as in the case of some amphibious vehicles.

Essentially then, our comparison on vulnerability of the helicopter is with four other means of transpor-

tation. They are as follows:

1. Landing craft
2. Amphibious vehicles
3. Motor vehicles
4. Fixed-wing transport aircraft

The next thing to take into account is the protection to be provided. All our transport means must be protected by combat forces. Landing craft are given protection by combat aircraft and surface ships. So are amphibious vehicles. Motor vehicles likewise are given protec-

tion against air and ground attack. Fixed-wing transport aircraft are protected by fighter aircraft. These fighter aircraft not only protect them from attack by other aircraft but also suppress antiaircraft fire by attacking antiaircraft positions. Similarly, this protection must be given to helicopters. So with this premise agreed to we can proceed with our analysis.

Now THAT WE have a common basis for comparison, let's get along with our analysis of vulnerability.

First off is the "too slow" argument. Landing craft aren't noted for speed. The helicopter is anywhere from six to ten times as fast. The amphibious vehicles are notoriously slow in the water. The helicopter is, conservatively, from ten to twenty times as fast. This advantage is reduced when the amphibious vehicle is on land, but the helicopter is still at least five times as fast. None of our motor vehicles can come close to the speed of the helicopter in cross-country operations. Even with the motor vehicle on a smooth road under favorable conditions, the helicopter has an advantage of two to one or better. The fixed-wing transport aircraft alone of all our other comparative trans-



More maneuverable than its fixed-wing cousin

portation means can outdo the helicopter so far as speed is concerned. This advantage is in the order of one-and-one-half to twice as fast. Future helicopters will reduce the speed advantage now enjoyed by fixed-wing aircraft.

"Too big a target"—Small landing craft have a slight advantage here due to the fact that a substantial portion of the hull is under water. The same applies to amphibious vehicles while in the water, but once ashore this advantage is lost. Motor vehicles have a slight advantage as to size. Fixed-wing transport aircraft cover a much larger area due principally to large wing areas. The area of the fuselage in large helicopters will not differ too much from fixed-wing aircraft.

"CAN BE SEEN a long way off"—Landing craft and amphibious vehicles in the water can be seen for considerable distances under good visibility conditions. From low angles, with fairly heavy swells, the difficulty of detecting them is increased. On land, amphibious vehicles are relatively easy to see due to their high silhouette. Motor vehicles on the move are not too difficult to see, particularly when operating on roads. Our fixed-wing transport aircraft is not as maneuverable as a helicopter and therefore can't take advantage of terrain features to avoid detection as well as the helicopter. None of our transportation

is too well off as far as concealment is concerned. Planes and landing craft are at a distinct disadvantage because there is little concealment in the air or on the water.

"CAN'T DEFEND ITSELF"—With the possible exception of some types of amphibious vehicles none of our transportation has much in the way of armament. It was not designed for the purpose of fighting. However, it all has limited means of defending itself by evasive action. Landing craft can use evasive tactics to a limited extent but they are confined to the surface of the water. The same applies to amphibious vehicles while they are water-borne. On land, both amphibious vehicles and motor vehicles have similar capabilities of evasive action. The wheeled motor vehicle in most cases will not have the cross-country mobility of the tracked vehicle, particularly when fully loaded. On roads, speed is the principal means of defense but there is the disadvantage of being confined to one thin ribbon susceptible to blocking, therefore reducing the speed advantage. Our fixed-wing transport aircraft has the ability to move in more than one plane. In order to maintain flying speed, however, its forward motion is considerable, and radical, abrupt movements are limited. However, it can take some advantage of prominent terrain features to evade being hit by antiaircraft fire.

The helicopter on the other hand has many ways of evading fire. It can stop, move vertically up or down, or even fly backwards or sidewise. This is particularly of value against anti-aircraft fire controlled by means of computers, electronic or otherwise. Such fire requires that the target's course be predicted with a reasonable degree of accuracy. In conventional fixed-wing aircraft this can be done because the aircraft must always maintain a relatively high forward motion. Then too, the fire must be at a point in front of the aircraft so that the projectile and aircraft will arrive at that point at the same time. What happens in the case of the helicopter which takes evasive action? A momentary stop, side movement, backward movement, vertical movement—any of these can be used to throw the computers off.

Probably the most effective means the helicopter has to evade fire is its ability to take advantage of terrain features. No other aircraft has the ability to follow the configuration of the land as closely. If he knows the position of the enemy, the helicopter pilot can utilize the terrain to avoid fire from the ground. He can avoid early detection both visually and by radar. Should the terrain be covered by heavy vegetation or forest, or be very irregular, the helicopter will not be seen until it is almost on top of the observer. It will normally be over and gone before effective small-arms fire can be brought to bear.

HOWEVER, IF THE helicopter must fly across open water, or over flat prairie or desert country, then it is relatively vulnerable. High flying increases the possibility of radar detection and makes heavy antiaircraft fire possible, but minimizes the danger from small-arms fire. The helicopter pilot's best bet usually is flying close to the deck and taking advantage of his ability to maneuver radically.

As far as being hit by infantry weapons, the odds again favor the helicopter which takes proper evasive action. The principle that the projectile must reach the same spot in space at the same time as the target still pertains. As long as the target is moving, there must be a lead taken by the weapon operator. A straight diving target is relatively

simple to hit, but hitting an erratically maneuvering one is most difficult. Here is where a helicopter has an advantage. This advantage has been proven time and again in Korea. There is record after record of our fixed-wing combat aircraft being shot down in heavily defended areas and yet helicopter rescue craft have gone in those same areas, rescued the pilots, and come out unscathed. This is the best proof there is to show that helicopters can ably defend themselves when they know that they are being fired at. The answer is "maneuverability." None of our other means of transportation can come close to the helicopter in this vital method of defending itself.

"Hit a rotor blade and down she comes"—Here we must try to get a means of comparison since our other transportation examples don't have rotor blades. What can we use? The rotor blades are essential to propulsion of the helicopter and are

vital to staying up in its medium—air. Therefore, our comparison should be with the propulsion and vital parts of our other forms of transportation. With the landing craft, staying afloat is vital. Lack of propulsion can be serious but not necessarily vital. So it would appear that damage below the water line would be a serious matter in the case of landing craft. Mines, underwater obstacles, and explosive projectiles are probably the most important. During World War II, we lost many landing craft to these hazards. So we can say that the landing craft is somewhat vulnerable. Likewise, the amphibious vehicle is susceptible to these same hazards while water-borne. On land, the amphibious vehicle has to cope with land mines, antitank weapons, and artillery fire. Motor vehicles have similar problems and in addition are vulnerable to small-arms fire, particularly the tires and en-

gines. However, a disabling blow in these parts does not necessarily mean that the cargo or personnel is lost. Land mines and artillery, however, can make quite a mess of such vehicles.

The fixed-wing transport aircraft, on the other hand, can forget about the land mines, field artillery, and antitank weapons. Its principal concern is antiaircraft fire, and to a lesser extent small-arms fire. It can stand some punishment but the area covered by fuel tanks, control surfaces, and power plant is quite extensive. A disabling hit on the power plant will, in most cases, cause the loss of the aircraft and its cargo. The fixed-wing transport requires a sizeable area in which to make a landing immediately when power is lost. Unfortunately, airfields are not always conveniently located in such cases.

Now, let's look at the helicopter. The engine is a vulnerable spot. A power failure doesn't mean the loss of the craft and its cargo. The rotor can be used to bring the helicopter down safely by "auto-rotation." The rotor, in this case, acts as a parachute to ease the descent.

"But," you say, "what about that rotor? Are you trying to evade the issue?" No, not at all. The records show and tests have proven that, contrary to popular opinion, rotors are quite rugged. They can take more punishment than is generally realized. Rotors have been pierced by projectiles of various sizes without causing control of the aircraft to be lost. Loss of a rotor blade in some types of helicopters could be fatal but with multi-bladed rotors it might be possible to lose a whole blade without losing the aircraft.

In summary, the helicopter can hold its own when it comes to the test of vulnerability. In many of the comparisons, we have found that it is far superior. In others the differences have not been so great. But on the whole, the helicopter shows up well.

Consider the helicopter for the means of transport that it is. Don't expect it to go into fortified areas without combat support. But give it the proper support, use it for the purpose for which it is designed, and you won't be disappointed. US MC

It proved to be the tool for the job in Korea



"DARKHORSE"

By LtCol R. D. Taplett
and Maj R. E. Whipple

☛ "DARKHORSE" HAD BEEN CALLED upon before to work alone as a battalion in the early fighting in Korea. In fact it had been singled out to make the assault on Wolmi-do, key to the success of the Inchon landing.

It was no better or no worse than other outfits, but it had the advantage of more service and more training—the nucleus of the battalion was made up of regulars who had been serving together since 1948. It made for a cocky bunch with a tremendous amount of pride and loyalty in their organization, an outfit that considered it a pat on the back to be selected for a special mission—the tougher the better.

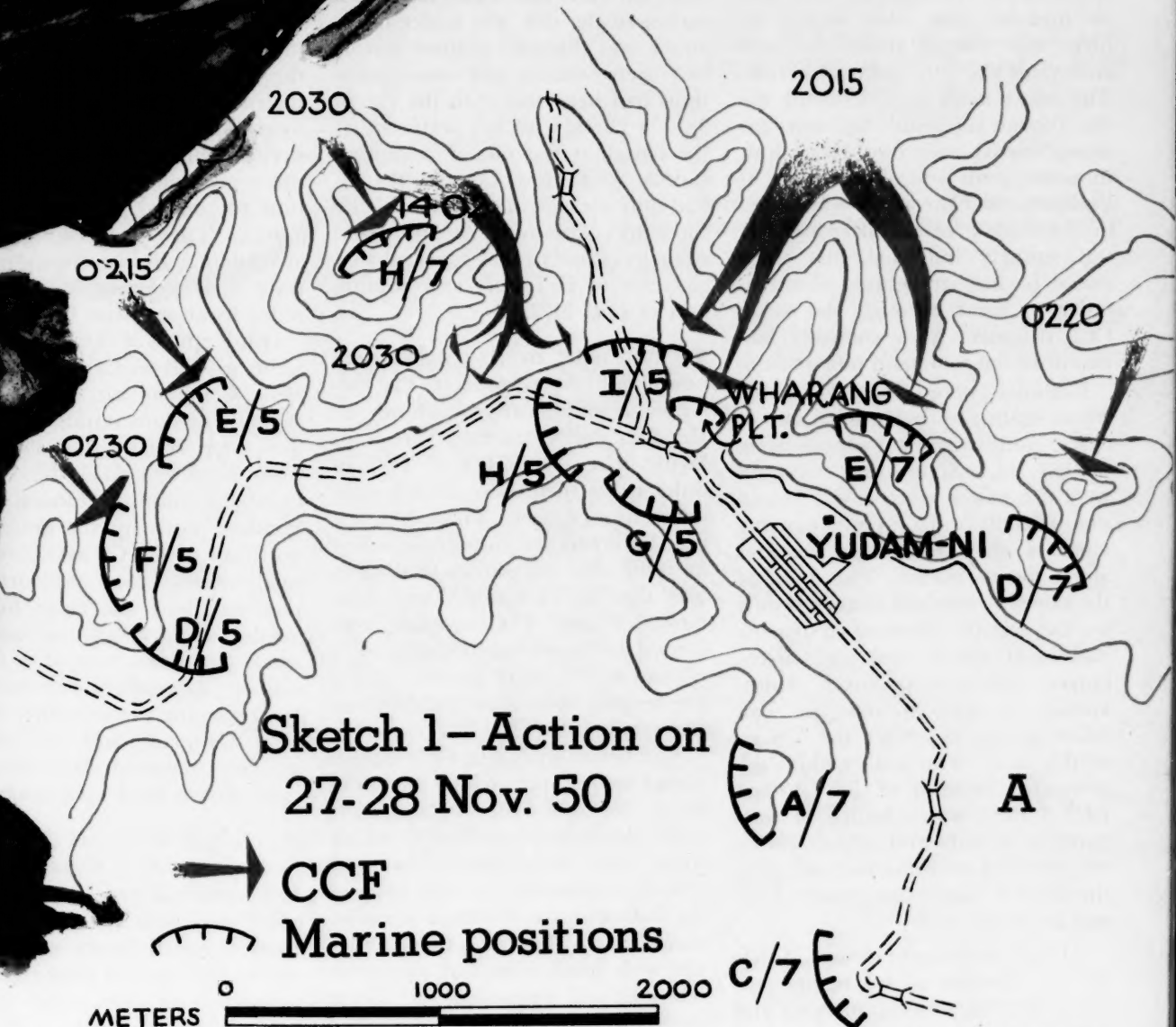
"Darkhorse"¹ was the Third Battalion, Fifth Marines, and it was to play a featured role in the bitter fighting during the attack from Yudam-ni to Hagaru as the First Marine Division battled its way back from Chosin Reservoir.

On the 27th of November 1950, the First Marine Division was continuing the attack north and west of Yudam-ni on its advance to the Yalu River. The CCF (Chinese Commu-

¹Darkhorse was the call sign of 3/5. This name, used in the communications network, was the one accepted by the members of 3/5 and personnel outside of the unit, and continued in use after it had served its purpose as a call sign.

nist Forces) had previously crossed the Yalu and had moved into North Korea in considerable strength. They had halted the advance of the Eighth Army in the west and had forced a withdrawal of that unit. The continuation of the attack by the Marines in the heart of Korea, west of Yudam-ni, was planned and directed to divert the attention of the CCF from the Eighth Army and especially to relieve the pressure on the right flank of the Eighth Army now hurriedly retreating to the south.

Because of the Eighth Army withdrawal and the intelligence reports of strong concentrations of CCF troops blocking the MSRs to the



west and to the north of Yudam-ni, and because of the logistical problems involved in supplying units already spread out in a dangerously thin line, the Marines were becoming somewhat alarmed and apprehensive over their mission to continue the attack to the west of the Chosin Reservoir.

Such were the circumstances the day the 3d Bn, 5th Marines, reinforced, moved from the northeast side of the Chosin Reservoir to the northwestern sector of Yudam-ni. It was the last day the Marines were to make any further advance to the north and west. Enemy resistance confronting the 5th RCT up until

this time had been light and sporadic. Considerable activity by the CCFs on the east side of the reservoir had been encountered but no sizeable contacts had been made. The 7th RCT, however, on its push to Yudam-ni, had run into mounting resistance but had seized the area from the withdrawing CCFs. RCT-5 which had been ordered to move from the east side of the reservoir and pass through RCT-7 west of Yudam-ni, had commenced the attack in the morning. The 5th's plan called for an attack with the battalions in column, the 2d Bn leading. The column passed through and then was assisted by 3/7 in the

westward push along the MSR to Mupyong-ni. The 3d Bn was to be prepared to assist 2/5 or to pass through it and continue the attack to the west when ordered.

The night of 27-28 November was bright and cold. The Marines do not recall too vividly whether the moon was up or what quarter it was in, but they do recall that it was light enough so that an enemy dressed in white² could be seen at a distance of up to a hundred yards in open terrain. They also recall that it was very cold with temperatures going down to as low as twenty degrees below zero. In spite of the snow and bitter cold, however, as

the early mountain night descended and 3/5 blacked out, the assembly area was relatively quiet and peaceful. But there was something in the air. The cold, quiet peacefulness was charged with apprehension — apprehension brought on not only by nightfall, but also because so little was known about the new enemy, his strength, and his location. The attack made by 2/5 during the day, though successful, had run into strong enemy resistance about four thousand yards west of the village of Yudam-ni, and the attack was halted in the middle of the afternoon. It was strongly indicated that there would be heavier fighting ahead in order to break through the tough CCF defenses. Each company had tied-in to the command post at dark.

Foxholes were chipped in the frozen earth to provide some sort of cover, and infantry weapons were sighted in. Supporting weapons were not laid-in since it was known that friendly units were occupying most of the key terrain features along the perimeter. The quiet of the assembly area was disturbed only by the activity involved in posting additional squads and platoons at outpost positions to cover critical terrain features around the battalion perimeter. Since the 3/5 assembly area was well within the perimeter defenses of RCT-5 and RCT-7 there was a feeling of comparative security and safety. Everyone counted on some rest and only the normal twenty-five percent alert was required.

The picture was to change. Little did the Marines in 3/5 realize that heavy fighting would come soon and would be done in their assembly area, including the command post. This was the night 27-28 November and the CCF had selected the 1st Mar Div for annihilation in detail. (See sketch, page 15.) About 2100, I Co and the Wharang platoon (a unit of Korean National Police attached to H&S 3/5) in the north and east sector of the assembly area re-

²The night of 27-28 Nov, the enemy was dressed in white. It was one of the few times that the enemy was seen in anything other than the usual olive-green winter clothing. Evidently, at least part of the Chinese were equipped with winter clothing which was reversible: white on one side and the usual olive green or dark tan on the other.

ported receiving small-arms fire in their sector.

A short time later Marines from H/7 began entering the area. Some of them were without shoes and outer clothing and they reported that Hill 1402, which they had taken earlier in the day, was under heavy attack and that two platoon sectors had been overrun and communications had been lost with the CP of 3/7. A check with 3/7 verified that the battalion was out of communications with How Co and that it had only meager information of the company's situation. As additional stragglers came in they reported that elements of H/7 were still holding part of Hill 1402.

☛ ALL UNITS OF DARKHORSE were now on a fifty percent alert. The battalion communications officer, Lt Hercules Kelley, started a wire team laying wire from H/5 to H/7 in order to tie them into the 3/5 communication system. Thereafter, except for occasional casualties coming off 1402 and occasional small-arms fire, the area remained ominously quiet. H and I Companies were alerted to be especially cautious in taking unidentified persons under fire because of stragglers and casualties coming off Hill 1402.

Just before midnight H/5 spotted enemy troops approaching along the lower slopes of Hill 1402 on their right flank and obviously taking cover and concealment in and around native huts at the base of the hill about a hundred yards to their front. They took them under fire with small arms and automatic weapons and requested the 75mm recoilless gun platoon (attached to 3/5 to cover tank approaches from the north and west) to fire into the huts. This set them on fire and the Chinese began running in all directions. It turned out to be a turkey-shoot for members of H/5. The burning buildings lit up the whole area and the Chinese could be spotted and shot the minute they began to move. Chinese casualties were very high while the only casualties in How Company for the night were from frostbite.

Not long after the turkey-shoot, the platoon leader of the first platoon, H/5, Lt Williams, was sitting in the warm-up tent which had been set up in his area. He was looking at

the top of the tent and commenting that it was getting holes in it from being bounced around in the jeep. As he watched, the number of holes increased. There was little time lost in getting out and into defensive positions. H Company was not under attack, but shots from the enemy located on the high ground above the battalion CP were falling in their area. Marines of the third platoon of H/5, located just west of the stream which ran along the MSR, threw grenades into the stream from time to time to keep the icy water flowing. They were making sure that any attempt by the enemy to penetrate their position would be preceded by an ice-water bath.

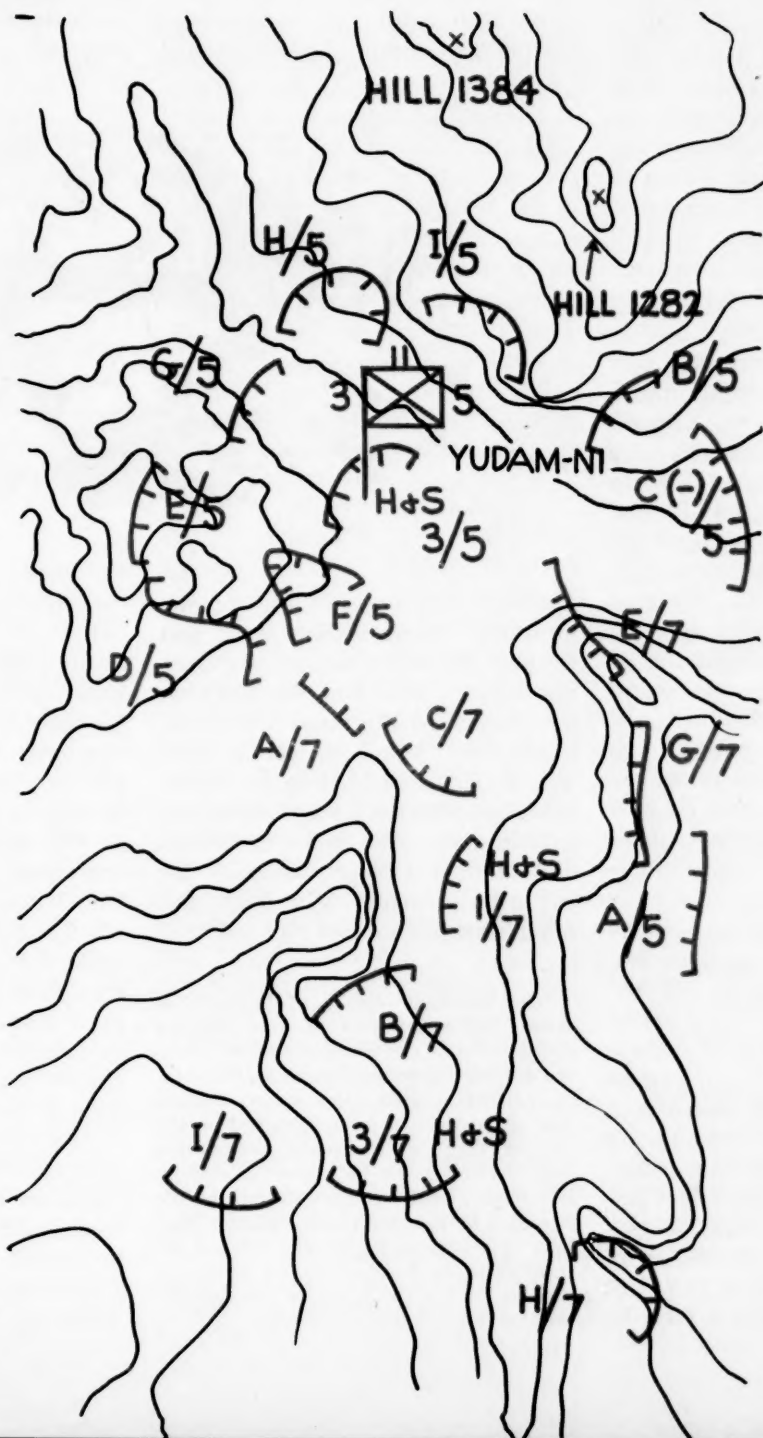
Other units of 3/5 did not fare quite so well as Capt Williamson's How Company on this particular night. The short respite and the elation over H/5's turkey-shoot were short lived. At 0115 the Weapons Company outpost, located several hundred yards up the draw to the northeast of the CP area, fired on a small enemy group approaching its position along the ridge from the north. They killed one and definitely identified him as a Chinese soldier. The others withdrew without returning the fire. Shortly after, Item Company and the Wharang platoon reported small-arms fire coming into their area again.

☛ IN THE MEANTIME the wire line to the remaining elements of H/7 had been laid and communications established with 3/5. H Co, 7th Marines reported heavy enemy troop movements around their right flank, apparently an effort to cut the MSR behind H/7 and 2/5. This report was shortly verified by I/5 who also reported many enemy troops moving toward its sector from the northwest. After withdrawing the company outpost, I Company took these troops under fire. The enemy was dispersed and discouraged to the extent that the center and left flank platoons were not again bothered during the night. The enemy did not quit, however, and he was apparently determined to cut the MSR. Shortly after Item Company had dispersed the force approaching along the corridor floor, the enemy launched a strong attack along the ridge to the right of the command post against the 2d platoon of I



Left: Sketch 2 — counter-attack of G Co at 0400 on 28 November 1950

Below: Sketch 3 — Marine positions shown as of 1800, 30 November 1950



Company and the Wharang platoon.

Well after dark the 2d platoon of Item Company had been moved to outpost the ridge forward of the Wharang platoon. This was necessary because it was learned that D and E Companies of the 7th RCT were not occupying the high ground forward of 3/5 as previously reported.

After placing his squads in position the platoon leader crawled into his sleeping bag and was talking to the company commander on the phone when he noticed five or six figures creeping up over the side of the spur. He paused, thinking they were his own men. The hesitation was only momentary before he realized it was the enemy. He hopped up and grabbed his carbine and tried to fire. It was frozen! In stocking feet with a useless frozen carbine in hand he made a dash to the rear where he had placed one of his machine guns. Fortunately, when he jumped up he startled the enemy troops and instead of firing they ducked back into the trees.

Shortly after, there were two enemy whistle blasts which brought an estimated two companies of Chinese screaming and firing from both sides of the spur. Instead of coming down the crest of the spur, they had filtered down either side and bypassed the squad which was placed forward as the platoon point. Then on signal they attacked from either side up over the crest. They caught the 2d platoon completely unawares except for the forward squad which had been bypassed. The enemy then quickly overran the remaining elements of the platoon and charged headlong into the Wharang platoon on the extension of the ridge immediately above the CP.

In the course of the first enemy thrust, one of the 2d platoon Marines was knocked bodily off the steep ridgeline and actually rolled head over heels down the slope into the Weapons Company position. An interrogation of the man revealed only that there were plenty of Chinese coming down the ridge. The Wharangs caught the full thrust of the assault, and though overrun, the heroic self-sacrifice of their machine gun section (4 killed) furnished the short delay needed by

the CP to organize its defense.³ By the time the CCF reached the command post, H&S was ready for the attack. The H&S Company commander and the Bn Exec had placed every available man and officer in the CP into firing positions. For a short interval, the attack forced the right flank of H&S back about a hundred yards to the MSR, leaving a large gap between the CP and Weapons Company to the right. Certain command installations were left temporarily uncovered in this "no-man's land."

It was during this period that the Chinese managed to roll grenades into the communications tent and knock out the switchboard, temporarily cutting all wire communications and wounding the switchboard

CP rallied H&S personnel who retook their previous positions, restoring the right flank and re-establishing contact with Weapons Company. The wire section worked feverishly to re-establish wire communications. The S-3, working with the CO in the operations tent, stood with pistol in hand cocked and ready throughout this entire period. Slugs and several fragments from grenades went through the tent but no Chinese got to it, thanks to the accurate shooting of Pfc Swenson, the CO's "radio packhorse." A good thing it was, because the operations officer's pistol had frozen in the sub-zero weather and couldn't have been fired.

There were many casualties on both sides including the Bn Exec, Maj Carney, who was killed before



operator. For a period, the communications officer, sliding back and forth on his belly between the communications tent and the blackout tent, provided the only contact between the CO and the switchboard. The Bn CO remained in the operations tent with the S-3 and continued to maintain radio communications and readied George Company for the counter-attack. The Exec and other staff officers and NCOs in the

³The Wharang platoon of Korean National Police consisted of two infantry squads and one machine-gun section. There was a Marine lieutenant in charge with Marine NCOs as squad and section leaders. The actual story of what happened on the hill that night in the machine-gun position will probably never be known in that no one lived to tell it. The evidence of the dead machine gunners and Chinese, however, is a story in itself. The S-2 and the intelligence NCO counted seven dead Chinese in front of the Wharang machine-gun position the following morning.

the attack was contained. G Company was able to counter-attack at about 0400 and drive the enemy back up over the spur. (See sketch 2, page 17.) The counter-attack was swift and effective. With two platoons abreast, the company moved up through the CP and on to the spur. The second platoon commanded by Lt Cahill took the left side of the spur, and the third platoon commanded by Lt Cashion took the right side of the spur. Casualties were high but within an hour they had retaken the spur and pushed beyond the original positions occupied by the 2d platoon of Item Company.

At daybreak, the positions initially occupied by 3/5 were intact. The only area which had been seriously threatened was the spur above the command post which had been occupied by the right flank platoon of Item Company and the Wharang

platoon. This position, overrun by the CCF, had been retaken by G Company.

At about 0730 on the morning of 28 November, a group of approximately ninety CCF troops approached G Co from the northeast. The 3d platoon took this force under fire and the enemy withdrew. After this there was a period of relative quiet in the 3/5 area. The members of Darkhorse had a chance to appraise their situation and lick wounds. How Company had suffered no casualties other than frostbite. Item Company had suffered casualties, mostly from the 2d platoon which had been overrun. H&S Company suffered many casualties, including the Bn Exec. The Wharang platoon lost fifteen men, four killed and eleven wounded. George Company had many casualties during the night. Although many of their losses occurred during the counter-attack, including the platoon leader of the 3d platoon, Lt Cashion, there were more George members put out of action by the sub-zero weather than by enemy bullets. Excess clothing had been laid aside to facilitate ease in movement during the counter-attack. When the objective was taken and additional clothing was needed it was not quickly available.

HILL 1402, which had been occupied by H/7, was now in the hands of the CCF troops. From this hill the enemy had an excellent view of the positions and movements of the various units in 3/5. Although orders still required continuance of the attack to the west the Marines somehow felt that they had come to a definite and abrupt halt. During the night the enemy forces had moved into the Chosin Reservoir area in strength and completely surrounded the Marines. The Chinese had struck in force all along the MSR from Yudam-ni to Hagaru. They had wiped out many small Marine outposts and occupied key terrain features. They had isolated F/7 in the Toktong Pass and C/7 three or four miles south of Yudam-ni. The tactical air observer for the division had definitely located and reported seven physical roadblocks established by the enemy between the Marine position south of Yudam-ni and the Toktong Pass area.

In addition to learning something about the enemy during the night, the Marines learned a lot about cold-weather mountain warfare. From experience they had learned that care had to be exercised in the manner of dress and the necessity of changing socks periodically to prevent frostbite. They had learned that weapons had to be kept dry and free from oil so that they would not freeze. When a lubricant was needed, nothing heavier than a little shaving lotion was required. This was especially true of the carbines and pistols which more often failed to fire in the cold weather than did the M1s and automatic weapons.

THE LONG-AWAITED daylight brought little comfort to the Marines in the Yudam-ni area. As the full impact of the night's fighting became known, the CO of RCT-7, Col Litzenberg, and the CO of RCT-5, LtCol Murray, decided that the attack to the west could not be continued. They agreed that it was necessary to consolidate, reorganize, and establish a joint defense perimeter for mutual protection and to provide for a coordinated effort against this new and overwhelming force which surrounded them. (See sketch 3, page 17.)

During this consolidation the battalions of RCT-5 were to redeploy so that the 5th RCT held the north and west sector above Yudam-ni, and RCT-7 the south and east sector below Yudam-ni. The 2d Bn, 5th Marines was withdrawn into the new perimeter to a position on the high ground west and south of the village of Yudam-ni. The 1st Bn occupied the high ground to the northeast and 3/5 the high ground north and west. Darkhorse was to hold the north and northwest rim of the perimeter, particularly the key terrain feature, Hill 1282. It was here that the CCF were exerting the heaviest pressure.

During the morning of 28 November, all units of the battalion were ordered to new defense positions as part of the plan to relieve all of the 7th Marine elements north and west of Yudam-ni. H Company relieved G Company and occupied a position on the ridge where the battle had raged the preceding night. Their position extended over toward Hill 1282 which was occupied by Capt



Schrier's Item Company. George Company, a team of engineers, and the 75mm recoilless gun platoon organized defense positions across the valley floor from How Company to the 2/5 position to the south. A roadblock was established west of the battalion CP. George Company was designated as the reserve. Weapons Company and H&S were placed on the low ground astride the MSR east of the George Company position.

Item Company completed the relief of remaining remnants of E/7, A/5, and C/5 on the reverse slope of Hill 1282, with the exception of one platoon of 1/5 on the right shoulder of the hill. (A and C Companies had been sent to reinforce the position on Hill 1282 during the night.) Shortly after Item had effected the relief and was attempting to improve the position, it found itself under Chinese observation and was subjected to heavy small-arms, grenade, and mortar fire. Although the enemy made no determined attempt to attack, I Company remained in close contact and repelled minor probing actions.

H COMPANY in turn received sporadic rifle and long range machine-gun fire from the Chinese position on Hill 1384. Except for the "hotspot" on 1282, there were no concerted attacks against 3/5 positions.

Early in the morning of the 29th, the 3/5 roadblock covering the corridors leading into Yudam-ni from the northwest and west reported an estimated sixty CCF approaching down the northwest corridor to the left front of How Company. A short time later another group of Chinese started down the draw between H

and I Companies and made a thrust into the 2d platoon position of How Company. The enemy had come by a listening post which had been established to warn the company of any enemy approach. Marines at the listening post heard the enemy all right, but in the darkness they lost their way back and the enemy arrived ahead of them. The enemy approached the position within challenging distance before being recognized. The men in one of the machine-gun sections, thinking it was the outpost returning, let one of the enemy get into their position and actually hit one of the members on the head. No other Marine was hit, however, nor did the enemy get any closer for in the gray light of dawn the platoon took a toll of eighteen Chinese killed and three captured. The enemy was repulsed and the 3/5 area was again quiet except for small-arms fire.

BETWEEN ELEVEN and twelve o'clock two enemy attacks were made on the Item Company positions by a force estimated at two companies. Still a third attack came at about 1400. The latter attack apparently was coordinated with an attack on B/5 on Hill 1260. All of these attacks were repulsed with the support of mortar fire and air strikes. The position was awkward to hold because it was necessary to remain on the reverse side of the slope. The high ground in the foreground occupied by the enemy made it impossible to move up on top of the ridge or to the forward slope. Neither could an attack be made to drive the enemy from the higher ground because it would extend the lines of 3/5 too far and serve no tactical purpose. The enemy, on the other hand, couldn't turn I Co's left as How would bring them under fire, and B/5 on 1260 covered the right flank. Thus the position became stalemated. The Marines could not afford to drive the enemy from the high ground to their front and the enemy was not capable of driving the Marines from the ridge below, which overlooked the MSR. The enemy could move an attack force down to the ridge by covering it with fire from the high ground, but the attack force could not move over the top of Hill 1282 or around it without coming under the grazing fire of the Ma-

rines. Thus the chief infantry weapon was the grenade which the enemy and the Marines threw back and forth at each other over the crest of the ridge. During the enemy attack on the I Company position the morning of the 29th of November, over one thousand grenades were used in the period of about one hour. The battalion S-4, 1stLt J. A. Wachter, (also doing the job of the supply officer who had been wounded) had a difficult time getting grenades in quantity to keep Item Company supplied. The grenades in the battalion supply dump were exhausted and collections had to be made from G and H Companies for delivery to I Company.

When air strikes were called against the enemy attack force, they were made with the planes flying directly toward Item's position. This was one of the few times in the history of warfare that air strikes were made effectively and safely against the enemy while flying into and over friendly forces. Most of the enemy casualties resulted from the air strikes and grenades. In the few instances the enemy reached the crest of the hill, he was brought down by rifle and automatic weapons fire.

By now the strength of 3/5 had dwindled considerably. It had been in good shape when the action started, but by now the bitter cold and the heavy fighting had collaborated in causing the casualties that thinned the ranks. George and Item Com-

panies had been hit the hardest, which was to be expected after reviewing the firefights they had both been through.

The weather and the enemy kept chipping away at the Marines, causing more casualties and forcing them to expend critical supplies. Our combat strength and effectiveness were lessened as each day passed. In an effort to strengthen the rifle units the two regimental commanders organized provisional rifle platoons from the artillery, engineers, and H&S units. C Btry, 1/11 provided a provisional platoon (thirty-nine men and one officer) under the command of 1stLt Dorsie Booker, which was assigned to Item Company. A Btry, 1/11 provided one platoon (forty men and one officer) under the command of Lt Kellett, which was assigned to George Company. How Company, which had the fewest casualties, received no replacements at this time. There had been little activity in the H Company area except for the attack early in the morning which was repulsed.

Except for the close contact with the CCF in the sectors of Item Company and its neighbor, B/5 to the east, the night of 29-30 November



passed with no concerted activity elsewhere in the RCT-5 area other than the usual small-arms fire and occasional inaccurate light mortar fire.

Marine Air played a vital role as it continued to work over the Chinese positions immediately forward of Item and Baker Companies until darkness forced the planes to return to their bases.

It was a gloomy picture for Darkhorse and other elements of RCTs 5 and 7: The 7th RCT in its attempt to clear the MSR from Yulam-ni to Hagaru had been completely unsuccessful, and the battalion attempting the break-out had been withdrawn when faced with encirclement by the CCF. By now it was known that seven physical roadblocks existed, one of which included an all important bridge

which had been destroyed. This bridge not only would have to be secured, but also would have to be repaired by the small detachment of engineers to permit vehicles and equipment to accompany the troops in the breakout.

Just after daybreak on the morning of the 30th, the weary, half-frozen Marines in I Company came under another heavy enemy attack. The planned relief of Item by George Company was temporarily held up due to this attack. Although coordinated enemy pressure was brought to bear against B/5, the primary effort appeared again to be directed at Hill 1282. With heavy close air support and excellent mortar fire from Lt House's mortar platoon, the attack was halted although the enemy remained well entrenched over the crest in front of the Item position.

As the attack subsided, G Company proceeded to the relief of I Company, commencing at 0915. This relief was exceptionally difficult and

was hampered by light attacks, consequently it was not completed until around 1300. Item Company had fought at close quarters with the Chinese for over two days with no sleep and frozen rations which were in short supply. To hold the vital hill against the CCF, relatively fresh troops were required and the dependable "Firehorse," George Company, drew the role. Just after G Co had occupied the ridge, the enemy launched another attack concentrated on the right flank. The platoon leader of the right flank platoon, Lt Price, (a replacement sent from the regimental S-4 section), and Platoon Sergeant Golbert were killed. The platoon guide and two squad leaders were wounded. The platoon runner, Pfc Edmund Orsulak and a BAR man, Pfc David Alley, rallied the men on the right flank and held the line. Orsulak filled the job of the platoon sergeant and moved about the platoon position giving encouragement to the men and directing the fire. Alley assumed command of his squad when the squad leader was killed. He repositioned his men so they could deliver the most effective fire and kept them supplied with ammunition and grenades. Casualties were high on the right flank and little was left of the first platoon, but by 1600 with the help of air, artillery, and mortar



fire the attack was contained.

Early on 1 December the two RCT commanders decided to execute their joint plan for the attack to Hagaru. Speed was now of the essence as time ran in favor of the Chinese who continued to multiply while the strength and will and determination of the Marines ebbed. Breaking out of the Yudam-ni area with two RCTs and closing Hagaru would be the first and most difficult phase of the division's fight to Hungnam. The Chinese had concentrated strong forces along the MSR, especially between Yudam-ni and Hagaru, and the Marines in turn needed the route desperately if they were to come out with their equipment, vital supplies, wounded, and dead.

Darkhorse, occupying the north and northwest rim of the perimeter, was ordered to break contact, disengage, and then move to relieve the 1st Bn, 7th Marines occupying positions on the ridge south of Yudam-ni and along the lower western perimeter. The relief was to be effected as soon as possible on 1 December, so that 1/7 could be used to execute a wide envelopment overland through the mountains to the southeast to join and reinforce Fox Company, 2/7 which had been holding Toktong Pass. F/7 had been isolated and surrounded there since the night of 27-28 November. (See *Fox Hill* in the March issue of the *Gazette*) The 1st Bn, 7th Marines and F/7 were to hold Toktong Pass until a juncture could be made by the force attacking astride the MSR.

Early on the morning of 1 December, 3/5 commenced to disengage and withdraw. The initial phase of the maneuver, the withdrawal of H & I Cos, was relatively simple. The position George Company occupied had been under constant enemy pressure since the night of 27-28 November. The fighting had been so intense and fierce that it had become primarily a battle of hand grenades. The battalion S-4 had long since lost count of grenades sent to the defenders of 1282. By now G Company was well entrenched high on the reverse crest of the ridge and the CCFs were stubbornly dug in on the forward crest.

To permit G Company to disengage from the enemy at such close contact without a heavy loss in

casualties and without allowing the Chinese to attack over the crest and pursue the Marines down the rugged slopes, 3/5 neatly executed the disengagement under the cover of all supporting fires that could be mustered. It was accomplished by split-second timing of the air strikes and artillery fires with the maneuver of G Company. Because of the close-in disposition of the enemy facing George Company, there was considerable concern over the air strikes since to do the job they would have to be so close they might endanger the





TK

Marines. To insure the defenders of 1282 a chance to commence their move, Lt Greene, the FAC, decided to employ a familiar ruse, the "dummy run," to keep the Chinese down. He coordinated his plans with the artillery liaison officer, Lt Ammer, who was calling in the artillery fire. The G Co commander, Capt Hermanson, was directed to commence his withdrawal as soon as the first Corsairs made their pass over the target and to signal as soon as his troops were able to move out of the line of the strafing attacks. The FAC on receipt of this signal called in the live runs and plastered the crest and the forward slope of the hill with rockets, bombs, napalm, and 20mm shells. Lt Ammer, working elbow to elbow with the FAC, called in the artillery while the last plane was in its dive. In addition to this, all ammunition which could not be carried from the lines by George Company was thrown into foxholes along the front of the company position and touched off by throwing thermite grenades into the holes. The ridge appeared to disappear completely. Under cover of this tremendous bombardment the G Company Firehoses disengaged quickly and without a single casualty. The pilots orbiting overhead reported that the Chinese who were still alive were hurriedly scurrying down the forward slope and running north. Long after G Co had pulled off 1282 the Chinese continued to throw mortar fire at the ridge.

While the bombardment was going on B/5 was withdrawing from Hill 1260 southeast across the valley floor. Yudam-ni had been set afire and was smoking ruins too hot for the Chinese to occupy after the Marines' withdrawal. The bridge south of Yudam-ni was destroyed by the engineers as the last radio vehicle from 3/5 passed over.

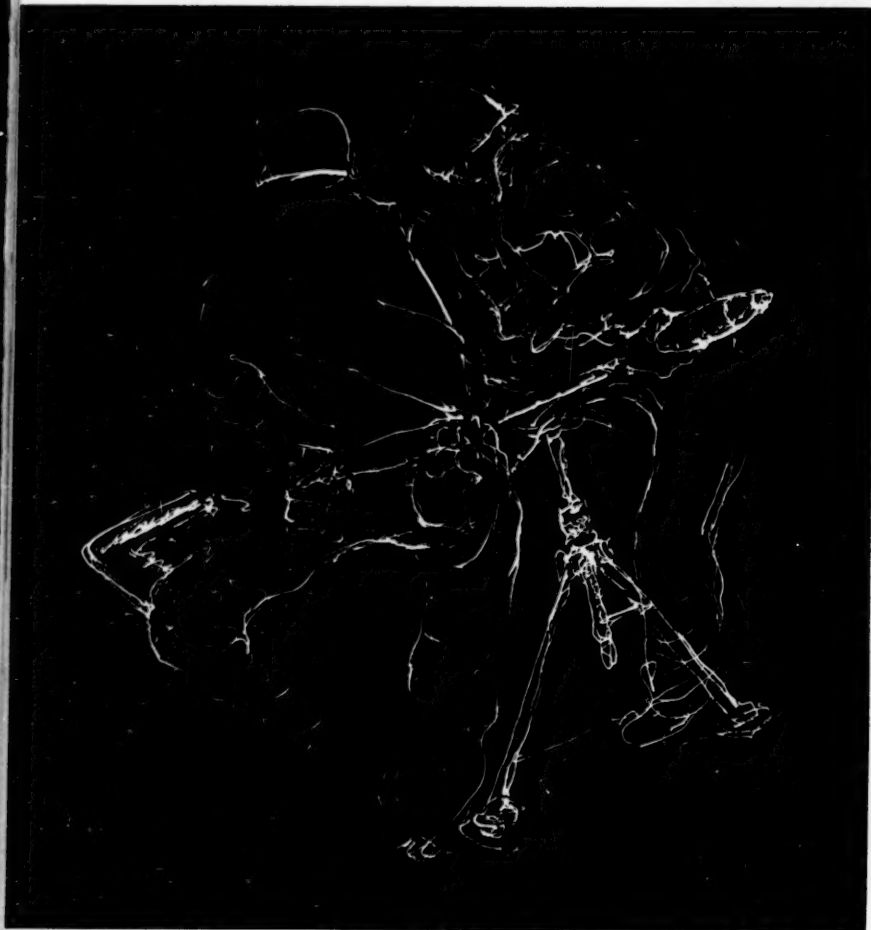
The relief of the 1st Bn, 7th Marines, by the 3d Bn, 5th Marines, (directed by the joint operations order issued by the COs of RCTs-5 and 7) was proceeding smoothly and was about fifty percent completed when the mission was changed. Darkhorse, the last unit to leave Yudam-ni, was now to spearhead the attack along the main supply route for both RCTs. US MC

(To be concluded next month)

'On Target' with

COMANCHE

The FDC system gave this outfit
accurate mortar fire in Korea



✱ EARLY IN FEBRUARY 1951, THE 81mm mortar platoon of the Second Battalion, Fifth Marines in Korea, officially adopted the fire direction center. The acceptance was not wholehearted, and objections were many. Primarily, the proponents of the direct method considered it a radical departure from the previously used system, and believed that the adoption of a fire direction center, particularly under combat conditions, would sacrifice efficiency for the sake of experiment with a seemingly vague theory.

After indoctrinating a sufficient number of personnel in the Comanche system, a simple process compared to the direct method, the mortar platoon moved to positions behind the main line of resistance.

Utilizing the fire direction center and employing the Comanche system with the M-10 plotting board, the platoon supported the organization on the line with fast, accurate, and efficient fire.

After that one practical application the remaining opponents of the use of a fire direction center employing the Comanche system were thoroughly convinced of its worth.

The numerous advantages derived by that one variation in a method of controlling fire were not immediately apparent. They showed up later, however, when comparisons were made of our efficiency as a supporting unit, both before and after the adoption of the fire direction center which utilized the Comanche system.

To begin with, the fire direction center allowed the mortar platoon leader to mass the fire of all his mortars on any one target by providing him with appropriate firing data in a comparatively short time.

To accomplish the same mission under the system used previously would have required considerably more time, since registration first would have had to be completed on the other guns that hadn't been firing at that particular target.

Another quite obvious advantage was noted during base point registrations by the forward observer. Under the new system, the forward observer needed only to send the fire direction center the azimuth and grid coordinates of the target for an initial registration. Using the di-

rect method the forward observer would have been required to plot his own position and that of the mortars in relation to the targets before he could announce the initial azimuth on which to lay the mortars for registration.

Under the old system, the forward observer had to estimate the approximate angle of the gun-target line in relation to his position, his own position in relation to the target, and also estimate the range from the target to the guns before fire could be called.

The probability of error under the direct system is enormous, and though corrections can be made, the time factor involved, particularly in combat, cannot be disregarded.

The advantage in using a fire direction center in this case is apparent. The forward observer needs only the azimuth of the target and one of his other concentrations or a reference point for adjustment on the new target. The plotting board, M-10, integrates this information along with range plotted at the fire direction center, and the resulting fire order to the guns takes only a matter of seconds. This method has proved more practical since it enables the forward observer to get on target much faster, and decreases the amount of ammunition normally expended on registration.

✿ PRIOR TO OUR acceptance of the Comanche system, the forward observer had to first estimate the distance to the target from the reference point, and convert this into mils to obtain the proper deflection in order that the guns could be laid on the correct stakes. The new system enables us to set our guns on the correct stake in an extremely short time, since the forward observer needs only to give us his adjustment from a known target for the initial round.

Should the forward observer become a casualty, under the direct method system no one except a trained forward observer who had all the information available could call fire. Under the new system anyone can call fire. He need not know where the guns are, or from which direction they are firing. All that is necessary is that he give the azimuth from his position to the target and the grid coordinates of the target.

The only prerequisite for delivering fire is that the observer calling for fire have as much knowledge of range estimation as a rifleman.

One of the most frequent objections to the adoption of the Comanche system is that when used on the offense it could become too unwieldy.

✿ USING PREDETERMINED base points, a section displacing forward and having contact with the forward observer is immediately able to deliver fire to the unit to be supported, thus releasing any of the other sections for displacement forward. This assures the unit or units of supporting fire at all times.

Should the fire direction center be destroyed, the section leaders of the platoon can continue to fire, uninterrupted, since each is familiar with its operation and supplied with the material necessary to operate independently of the platoon.

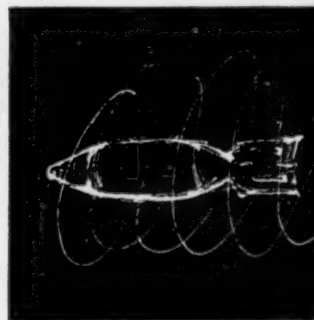
In cases of emergency, where immediate fire is needed from a gun and the crew is composed of inexperienced men, missions can still be fired with the same accurate results since only a basic knowledge of the functioning of the mortar is necessary. All data necessary is furnished to the first gunner by the fire direction center—namely, deflection, elevation, charge, and type and number of rounds to be fired, whereas under the direct method all computations are made by the first gunner.

The overall benefit thus derived from the acceptance of this system far outweighs the time consumed in training a platoon in its use.

Justification for the existence of the mortar platoon is directly proportionate to its ability to function efficiently as a supporting unit. Adoption of the much disputed Comanche system has shown us that missions can be handled with a maximum amount of efficiency and in the minimum of time.

The only objection to this method is that the Comanche system cannot cope with the one factor that has always plagued every attempted innovation—the flat, categorical denial of the new, regardless of worth, in preference to the old ways. USMC

By MSgt A. F. Hoffman
and
SSgt D. J. McCarthy

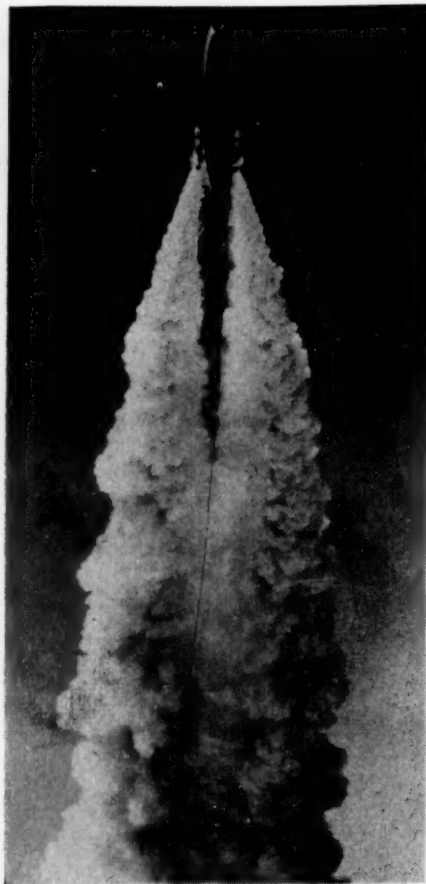


in brief

A 200-man guard unit composed of Korean veterans is being formed at Camp Lejeune, N. C. The unit will be known as the 2d Guard Company, and will base at Yorktown, Va.

The Regulus, a guided missile that can be launched from submarines, surface ships, and shore bases, has been tested by the Navy and put into production.

Developed by Chance-Vought Aircraft for the Navy, the Regulus is shown below being launched at sea. It resembles a conventional swept-wing jet fighter except that it has no landing gear, and carries a potent charge in its nose.



Just 4,000 yards from ground zero, Marines from Camp Pendleton and Camp Lejeune crouched in trenches as the latest A Bomb test blast took place at the Atomic Testing Grounds near Las Vegas, Nev., last month.

Leapfrogging over the men in the trenches just seconds after the blast, came 200 more Marines riding in forty Sikorsky helicopters. They drove through to ground zero to



practice vertical envelopment tactics.

The picture above was taken at 0435, with the flash of the bomb furnishing more than enough light.

Over sixteen thousand Marines have been decorated during the first thirty-three months of the Korean war. The total of 16,486 decorations includes twenty-eight Medals of Honor and 161 Navy Crosses and its equivalent, the Army Distinguished Service Cross. Purple Hearts were not included in the tabulation.

Three hundred enlisted Marines and sailors have been selected provisionally for entrance into the NROTC program. The candidates will attend four years of college and then will receive their commissions.



In an attempt to sneak through the sound barrier and to develop a plane that still acts like a real airplane at supersonic speeds, Douglas Aircraft has finally tested the X-3 after thirty-two man-lifetimes were poured into the task.

Starting in 1944, they experimented with dozens of designs and over seven hundred airfoils before test pilot Bill Bridgeman finally flew the

plane last month.

The X-3, designed to reach 1,320 mph, didn't fly any faster than a modern jet bomber on its first test, but eventually the craft is expected to reach its maximum speed.

Ripping a page from frontier days, the Marine air detachment supporting 2d Mar Div field maneuvers in the Caribbean called upon Pfc Leonard Bluebird, a full-blooded Sioux, to make a landing strip safe for aircraft at Camp Vieques.

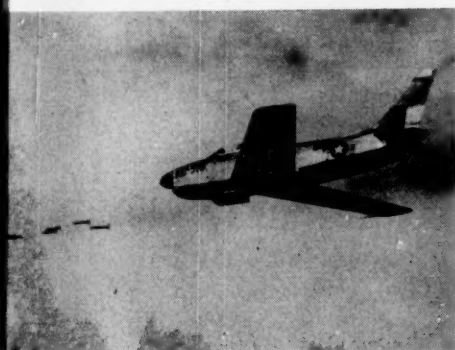
Pilots flying cargo to the maneuver area complained that wild horses and cattle herds stampeded across the runway each time they prepared to land.

After a call to 2d Mar Div headquarters, Bluebird and a posse of horse Marines roped themselves mounts, patrolled the runway, and made the strip safe for planes.

Reports received at Headquarters Marine Corps indicate that sixty-eight Marines previously listed as missing in action may be considered to be prisoners of the Chinese Communists. The Commandant has sent telegrams to the next of kin informing them of the fact.



British Field Marshal Viscount Montgomery was one of the guests attending the first phase of the Joint Civilian Orientation Conference at Quantico. He is shown above (second from left) with The Hon Robert Anderson, Secretary of the Navy; Gen Lemuel C. Shepherd, Jr., Commandant of the Marine Corps; Admiral William Fechteler, Chief of Naval Operations; and LtGen Clifton B. Cates, Commandant Marine Corps Schools, Quantico, Va.



Wide World

Capable of shooting down the world's largest bomber, the Air Force's new F-86D Sabre Jet (above) makes a test flight shooting a group of "Mighty Mouse" rockets from a secret rocket-firing pod beneath the fuselage.

The pod is retractable and is capable of firing twenty-four rockets. The ship recently set a speed record for operational planes of 698.5 miles an hour.

The F-86D Sabre Jet is built by North American Aviation Corp., and it is the Air Force's only one-man all-weather interceptor.

The 1st Mar Div has been awarded the Korean Presidential Unit Citation.

The award is the first to a large Marine unit from a foreign government since World War I, when France decorated the 4th Marine Brigade with the Croix de Guerre.

In citing the division for a year-long defense of Seoul invasion routes, President Syngman Rhee paid special tribute to the Marines for the fight against the initial attack by Chinese Communists at Chosin Reservoir in the winter of 1950, and in the Marine counter-attack of April 1951.

Mr. Shin Pai Yung, Korean minister of defense, is shown below as he places a pennant on the regimental colors of the 5th Marines.

In addition to the Korean PUC, the 1st Mar Div holds three U.S. PUCs won during World War II, and another for its part in the Inchon landing in September 1950. In all, the unit has earned nine battle stars on its Korean ribbon.



Marines on two coasts took part in amphibious maneuvers last month. On the East Coast, more than 5,000 Marines of Combat Team-2, under Col Robert F. Scott, staged the climax to TRAEX IV on the island of Vieques, just off Puerto Rico.

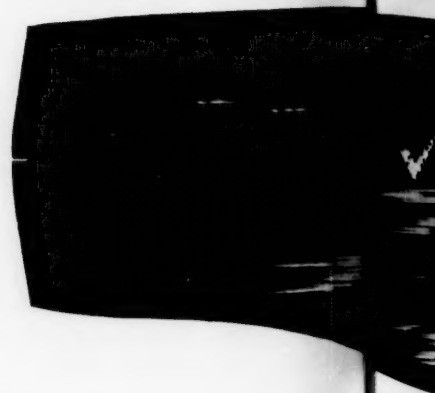
On the West Coast, thousands of Marines landed on the beaches near Oceanside in "Operation Sea Jump," the biggest amphibious maneuver to take place since 1948.



Firing .58-caliber muzzle loaders, the 1st Virginia Greys from Norfolk, Va., beat three other Rebel teams and three from "Yankee-land" to win the 7th annual North-South Shoot held at the Marine Corps Schools, Quantico, Va., last month.

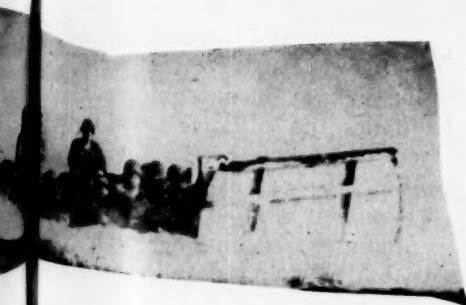
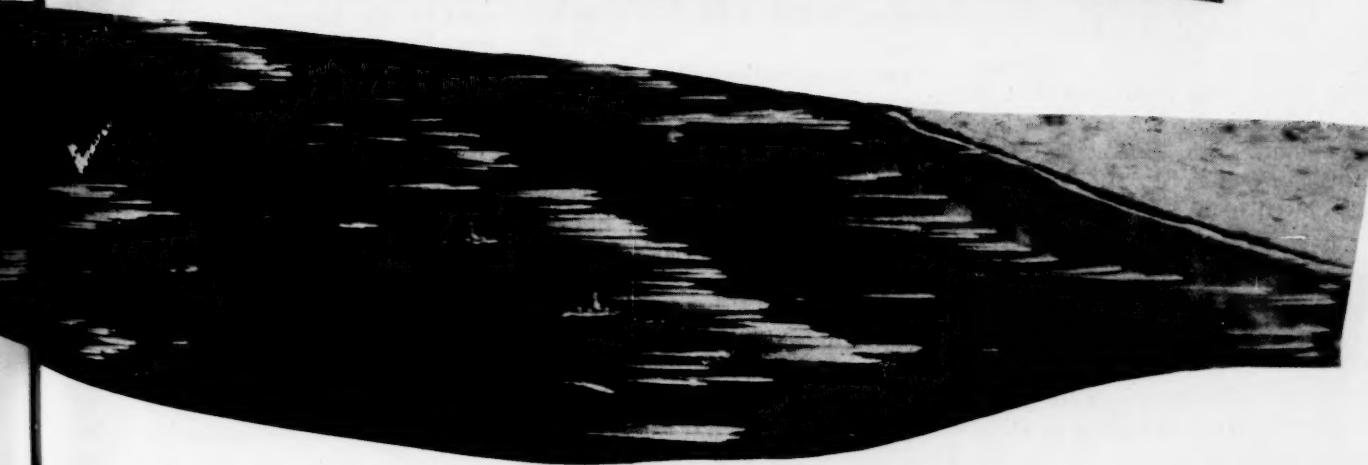
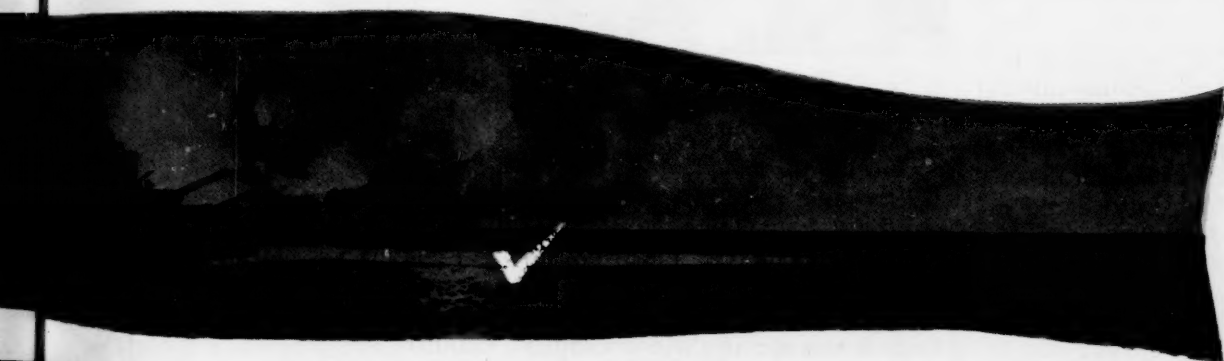
Shown above are William H. Carter and his son Donald, who fired with the Washington Blue Rifles.

**Checklist
for
a
Landing**





By LtCol F. S. Aldridge



GENERAL MAR LOOKED AT THE MAP OF THE OBJECTIVE AREA. THE WEEKS of staff planning for "Operation Landslide" were past, and the orders were in the mill. Had the staff planning been thorough? Were his decisions the correct ones? He couldn't turn the page and read the solution to *this* military problem. How could he check his solution—which if wrong would be all wrong? There would be no partial credit in an amphibious assault, no second try with the reserve regiment in the morning.

The entire operation started for Gen Mar when he received the corps directive "to land in the City area, seize the communications center of X-Ray without delay, and seize the airfield and port facilities at City." This was his mission. He had been told what to do but not how to do it. This particular amphibious operation had as its objective the securing of a

lodgement area from which to mount further operations, and after the division seized the high ground dominating City, it was to strike out for a further objective inland. The port and airfield facilities were to be seized as a second priority.

There had been times, the general mused, when the soundness of amphibious operations had been questioned—when the seizure of an objective did not further operations in some way, becoming a costly exercise. The British-Canadian raid on Dieppe became the subject of controversy when its objective was scrutinized. There were those who claimed that the mission at Dieppe—that of testing techniques and securing information—was not compatible with the loss of lives and equipment.

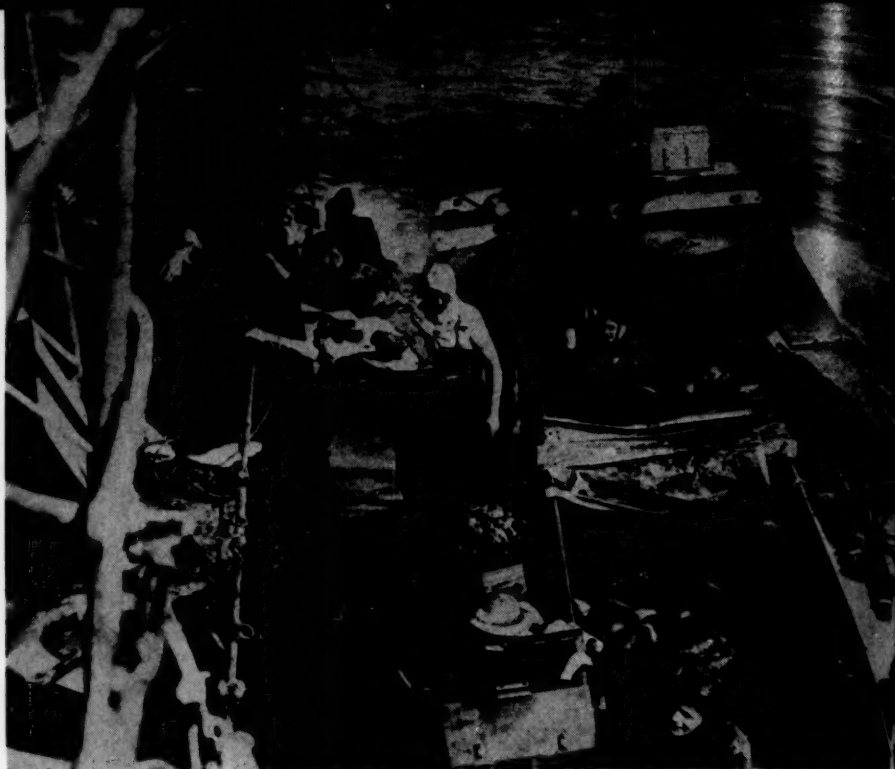
It appeared to the general that the objective of this landing fulfilled the major requirement for proper selection of an objective in that it advanced operations against the enemy. But was the gaining of the objective *possible*? If the amphibious assault failed, entire units would be lost. The general was acquainted with Omaha Beachhead—that had been close. So had Salerno.

Was this tactical plan for gaining the objectives possible? The estimates of his staff had been that it was. Detailed checking of the tactical balance sheet "Enemy and Terrain versus Our Forces and Terrain" had showed it to be in our favor.

To accomplish the mission, the landing force had been tailored with tanks and infantry, artillery and naval gunfire, and air and logistics support units.

Within the landing area itself, the general had selected objectives to be seized. The one labeled "Force Objective" on the operations map must be seized to ensure the integrity of the beachhead. Capture of Objectives 1 and 2, assigned to individual regimental combat teams, made the seizure of the Force Objective possible. To these RCTs were attached supporting units for firepower or logistics support.

"Why all this soul-searching as to the objective?" the general questioned himself. "Am I subconsciously applying the Principles of War* as



British Information Services

Dieppe—the objective was questioned

a checklist for my planning? If so, are the nine principles of war also principles for amphibious warfare? Perhaps, I should take the principles and see if planning for 'Landslide' has embodied them. At the same time, I can see if these principles are valid for amphibious operations."

The general looked critically at the principle of the objective. Perhaps the British phrase "Selection and maintenance of the aim" better suited his purpose. The objective must be properly selected, but the mission must also be accomplished. Adm Spruance, for example, did not lose sight of his objective to seize, occupy, and defend Saipan by charging after the Japanese fleet hundreds of miles away. Instead, he maintained the aim, and the objective was secured. "Selection of the objective and adherence to the mission" seemed to best describe this requirement, and the general felt that he had selected sound objectives and provided for sufficient forces to take the ground.

General Mar remembered how, as a regimental commander, he had maintained the offensive by careful

*The Principles of War are objective, simplicity, unity of command, offensive, maneuver, mass, economy of forces, surprise, and security.

selection of the time and place to attack. Picking the soft spot in land warfare was one thing; the amphibious landing was more complex. To ensure retention of offensive drive at the point of landing, the high-level planners had selected a vulnerable area on the perimeter of the continent for the attack. As the planning progressed, the naval commander and the general had decided the date for the landing. Duration of daylight, conditions of tide and wind, and other factors had all been studied.

This painstaking selection of place and time of landing ensured that the initiative would rest with elements of the attack force as it arrived in the objective area and the troops began to land.

But how was the initiative to be retained? To keep the operation from bogging down close to the water's edge, the G-3 and G-4 had worked out a plan. By the rapid "phasing in" of men, equipment, and supplies, the initiative could be retained. The blue circles on his map—the objectives—could be reached only if a rapid rate of advance inland was maintained. This meant that men and supplies must cross the beach in a hurry and in numbers. Only a quick build-up and a rapid rate of advance would re-

tain the initiative and prevent the stalemate of another Anzio, where we had the opportunity for an offensive to drive inland, had gained the initiative, and had lost it.

During the Pacific War, island objectives had been completely sealed off from effective reinforcement. Interdiction of the enemy routes of approach could never completely seal off the objective area for "Landslide." The enemy's reinforcement capability in this operation would be so great as to require that inland objectives be reached in a matter of hours after the landing—or else.

General Mar recognized that this was one of his greatest problems. At the shoreline at H-hour, he would lose his freedom of action, which he could regain only by building a force strong enough to stay on the beach and then to break out from the beachhead. He must retain his initiative. There would be a reinforced division aboard the transports of the task force. The job would be to get the fighting force to the beach and then to the next objectives. Retaining the initiative would be difficult without concentration of force. Looking back to Anzio again, it was the insufficient strength allocated to the operation, as much as any other factor, which changed the affair from an offensive to a perimeter defense. There were never enough troops to retain the initiative.

Continued isolation of the area by airpower and naval gunfire would reduce the ability of the enemy to concentrate and would, at the same time, permit our build-up. This dependence of his landing force upon air and naval gunfire prior to the landing of artillery had been apparent to the general when he placed his needs for a rapid rate of advance beside the estimates of his relatively slow artillery build-up ashore.

A classic precedent for isolating the landing area on a continental operation while additional forces were being landed was at Normandy. Airpower isolated the area while the initial landing waves became two armies. In the Pacific, the Navy performed a job of isolating the enemy that was almost one hundred per cent perfect.

Although artillery, tank, and other supporting arms would eventually assist the "Landslide" landing

force in achieving a concentration, the common denominator of concentration would be men. First there would be one man on the beach, then a hundred, and finally, many thousands. The ship-to-shore movement would be the bridge by which the general moved his forces ashore. This build-up would permit him to concentrate superior forces at a point. The landing plan on his desk was the blueprint of the build-up.

But the words "concentration in the face of the enemy," a military desirable throughout history (and the opposite of being "beaten in detail"), remained a problem. In front of Gen Mar was an intelligence summary outlining the enemy's considerable atomic capability. This placed the general on the horns of a dilemma. On one was the tactical requirement to move enough men across the beaches to take his first two objectives. On the other was G-2's well-founded estimate of the enemy's capability to deliver atomic bombs against the landing area. If the force were to concentrate, it might be hit by atomic weapons; if not, it would lack the punch to take its objectives.

Was there to be a new principle of war called "dispersion" which would outmode concentration? The general thought about it, then scratched dispersion as a principle

of amphibious warfare, recalling that in the principle of "security" were included all reasonable measures required to guard against enemy counter-action.

The decisions as to "when" and the mechanics of "how" to concentrate elements of the landing force had occupied a great deal of the planning staff's time. Even now, the general was not completely satisfied, since he had been forced to compromise on optimum tactics to gain reasonable security from atomic weapons.

But that was only one side of the security problem. Gen Mar hoped that security for "Landslide" could be kept by permitting only limited distribution of the plans. Surely, there was not the problem which faced Gen Eisenhower prior to the invasion of Sicily in World War II. During the preliminary stages of that operation, the long period of planning, the size of the operation, and the lack of control over civilians, friendly or otherwise, in the training and staging areas had created difficulties in keeping the plans from the enemy. Gen Eisenhower recognized this fact and was also aware that he had to reckon with the well-syndicated conjectures of Allied newsmen on Seventh Army objectives. He took the newsmen into his confidence, explained the plan, and requested their coopera-

Salerno—delay in regaining mobility made it close

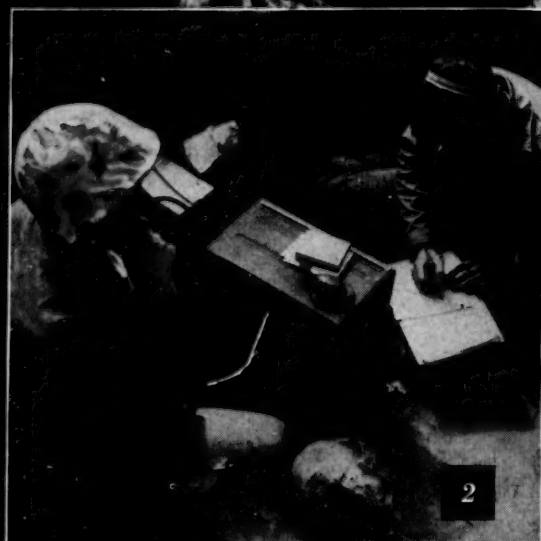
United Press



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1. Men—the common denominator
2. Communications—to coordinate
3. Planes—to retain the initiative
4. Tanks—to punch out from the
5. Ships—great striking power





4

*n denominator of concentration
to coordinate and control the movement
the initiative
out from the beachhead
ing power throughout the landing*

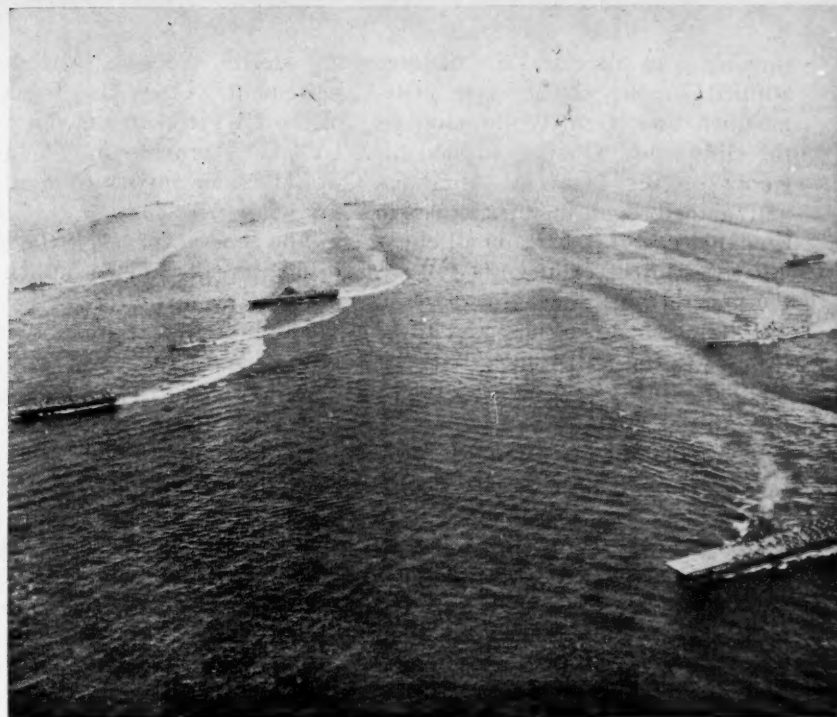
tion and silence. Thus, rumors via the news services stopped, and the plan for the invasion of Sicily was not compromised.

Such an unorthodox step was not necessary for "Landslide," but the instance stuck in the general's mind as proof that there was more than one method for solving the tough problem of security.

The Naval attack force commander, who was to lift and support the landing force, had stressed the limited availability of transports and naval gunfire support ships throughout the planning period. Logically, the principle of economy of force or "just enough and that's all" was of prime consideration to the Navy. Additional naval commitments for another and simultaneous operation and an acute awareness of what an atomic weapon could do to massed shipping, directed Navy thinking in this relation.

The general was aware that the Navy's current concern with economy of force was not new. Even during World War II, a period of great

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naval expansion, there were insufficient ships to carry out all commitments. The sea-air power of the fast carrier task forces was used to concentrate great striking power, then the task forces were withdrawn to strike elsewhere as soon as the job was completed. In this manner, one force could strike over an area of thousands of miles without ever being tied down to a defensive role.

Giving full consideration to the Navy viewpoint, planning had stressed the concept of economy of force. All staff members had been indoctrinated that any unneeded combat unit, service unit, or supplies brought to the objective area meant time, money, shipping, and men wasted, while giving the enemy additional targets.

As for the maneuver ashore and the plan of supporting fires—had the staff considered economy of force here? The general noted that his staff had done the following:

1. Utilized terrain that favored our troops to the resultant disadvantage of the enemy.
2. Recommended a maneuver which would enable us to contain the enemy with limited forces in one zone of action while we were pressing home the attack in another zone.
3. Planned a demonstration to draw the enemy from the landing beaches.

The matter of a demonstration

touched off the question of a surprise. Whether "Landslide" would gain strategic surprise was a question. The enemy could not fail to know that the division was preparing for an amphibious assault, as there were too many men training in an area under surveillance of enemy agents. The most that could be expected was tactical surprise—surprise as to the time, place, and strength of the attack. As an aid to achieving tactical surprise, the plan called for a demonstration thirty miles away from the objective to draw enemy reserves from the selected area. The landing itself would start just prior to dawn, another way of achieving surprise.

If there was any principle having a bearing on amphibious warfare, surprise was it. Without at least tactical surprise, "Landslide" might be a Dieppe on a grand scale. Since the objective was on a large land mass, the enemy's reinforcement capability was a basic consideration.

Every time he thought about surprise, the general recalled Tinian in the Marianas, and how two divisions landed over six hundred yards of beach (only 125 of which were usable by LVTs and DUKWs). The 2d and 4th Mar Divs ignored the good beaches, which were under the guns of the enemy, and scrambled ashore where a company would have been cramped. This was tactical

surprise as to place and size of force applied in the classic style. (Remember how Gen Wolfe climbed the cliffs below Quebec, formed his troops on the Plains of Abraham, and gained tactical surprise as to time, place, and practically all else?) That was in the eighteenth century, the general mused, leaning back in his chair. He lit a cigar and lifted his eyes to the wall chart. This was another century and another operation.

The general's attention was held by two symbols on that chart. One was a block representing the ships in the transport area, the other an arrow projecting out from the beachhead to the northwest. The latter represented Combat Group Kilday, a force composed of tanks and accompanying infantry and scheduled to punch out from the beachhead in a drive for deep objectives.

In his mind, Gen Mar placed a large question-mark at the water-line between the transport area and the big area, pondering how he was to regain his mobility. While his landing force remained aboard the transports, it possessed mobility, for as a water-borne force it could strike any one of several objectives and do so at a time of its own choosing. But once the command "Land the landing force" was given, mobility would be gone. Both landing and attack forces would be committed to the relatively slow build-up ashore.

The plans for "Landslide" contained no complete solution for mobility, nor would there be one until tanks could swim as fast as they could move over land. However, the landing plan *did* provide for landing armor, vehicles, fuel, and other necessities early. And there would be LVTs and LVTAs. When the Marine Corps had first become engrossed in development of the amphibian tractor in the late 1930s, Gen Mar had been on a board to field-test the vehicles. Now, years later, he would use these versatile vehicles to regain the mobility of his landing force. First, they would be utilized in the ship-to-shore movement, then to cross the beaches, and finally to push inland. Meanwhile, the general would have to depend on air and naval gunfire to reduce the enemy's mobility until the land-

ing forces regained freedom of movement. Then, the employment of the LVT to carry troops and the LVTAs to provide mobile artillery would be an answer to another big problem.

The general turned to the last two principles of war, simplicity and unity of command. Did they apply to amphibious warfare, and especially to "Landslide?"

As a platoon leader, the general had given the order, "Follow me." It had been a good order, since there had been no question as to whom it was directed, what the mission was, where the troops were to go, or when it would all happen. The "roughs" of the orders for "Landslide" already included over one hundred pages. "Was this simplicity?" the general asked himself. Actually, the scheme of maneuver was simplicity itself, and that was the criterion: simple plan with detailed instruction. In this sense the amphibious operation resembled a night attack.

During the planning, coordination between the Navy and the landing force had been excellent at all levels. Correct organization for the task at hand and prompt publication of command relationships had forestalled many problems before they arose. The general preferred to think in terms of coordination rather than unity of command, since the latter was inherent within coordination as a lesser-included characteristic. Yes, the word coordination would have to remain in the forefront as a principle by everyone from squad leaders and coxswains to the admiral and general until "Landslide" was over.

The telephone rang, and a voice at the other end informed Gen Mar that the "smooth" of the operation order would be ready that afternoon. "Good," he thought, "I'll get the RCT commanders in this afternoon to look at it. It's handy having the division all in one spot. Easy to get in touch with people. But once the movement starts, it will be another story. Communications! Does the plan for "Landslide" provide for the communications necessary to control the bulk of the landing?"

The general had isolated a fundamental. Communications are always

important in war, but the dispersed amphibious operation put added emphasis on them. Greater distances between units increased the need for control of these units, be they naval, air, or ground; and greater distances, in turn, increased the problems of communications. Gen Mar felt that communications was a principle of amphibious warfare.

He leaned back in his chair to review the planning in light of his thinking on the accepted principles of war. He recalled how he had employed these principles in the past, and now how he had appraised their validity as applied to amphibious warfare.

What did he have to show for his plans? The general believed that they had stood the test and that he had come up with a list of the Principles of Amphibious Warfare:

1. Selection of the objective and adherence to the mission.
2. Retaining the initiative.
3. Concentration.
4. Security.
5. Economy of force.
6. Regaining mobility.
7. Surprise.
8. Simplicity.
9. Coordination.
10. Communications.

Going up to the operations map, the general sketched in some final data. After calling in his G-3, Gen Mar pointed to the map and told him, "'Landslide' will succeed or fail depending on how our plans provide for retaining the initiative, achieving concentration when and where we need it, and regaining our mobility after landing.

"The solution to these problems will not lie in the plans of the division staff alone, but also in the actions and orders of all subordinate commanders. The company commander, who, after landing, strikes out aggressively with the bulk of his troops and supporting arms and keeps going, will have applied the three principles of amphibious warfare which are most critical.

"It is at the spot marked by the question-mark that I want the regiments to concentrate in their final training and in their tactical and logistical planning.

"'Landslide' depends on how we apply these Principles of Amphibious Warfare."

USMC

KOREA AWARDS

Medal of Honor

Cpl Duane E. Dewey.

Navy Cross

Capt William P. Brown, Jr.

Silver Star

Pfc John H. Baldwin, Capt Robert E. Benton, 2dLt Bruce E. Biel, Sgt Thomas B. Boylan, SSgt Buford L. Burns, Sgt James R. Chapman, Jr., Cpl Robert T. Connell, Jr., Pfc Felipe Cordero-Cantino, 2dLt James L. Day, Cpl Albert E. Desjardins, 2dLt Jim T. Elkins, Sgt Emil W. Evosovich, 2dLt Jett T. Ford, Jr., Capt Elmer R. Foster, Maj Joseph L. Freitas, Jr.

Cpl Robert M. Giblin, Sgt Robert A. Hyer, SSgt Peter J. Johansen, Sgt Phil H. Kirby, TSgt Edward D. Knecht, Jr., Pfc Albert D. Lang, SSgt Stanley W. Main, Sgt Philip V. Mandra, 2dLt Roland L. McDaniel, 2dLt Robert Moody, 2dLt Raymond G. Murphy, Cpl Paul R. Reynolds, Pfc William P. Riley, Pfc Charlie E. Savage, Sgt Clarence Wilkins, Jr., Pfc Thomas Williams.

Legion of Merit

LtCol John F. Carey, Col Robert E. Fojt (2d), LtCol Jacob E. Glick, LtCol Lewis A. Jones, LtCol James G. Kelly, LtCol Kenneth E. Martin, LtCol Robert F. Steidtmann.

Distinguished Flying Cross

Maj James Aldworth, Capt Robert D. Alexander, Maj Roy L. Anderson (3d), Maj James W. Baker, MSgt Robert P. Becker, Capt. William E. Bernhardt, Capt Donald L. Boudreaux, 2dLt Ernest C. Brace, Capt Douglas Call, Jr., LtCol Robert E. Cameron (2d), 2dLt Guy R. Campo, Maj Earl W. Cassidy, Capt John Churchill, Jr., Maj Donald G. Clarke.

1stLt Thomas B. Collins, Maj Ralph D. Coplan (3d), Capt Merlin L. Dake (3d), 2dLt Samuel A. Denyer, Jr., Capt Casper L. Dittrich, LtCol Charles E. Dobson, Jr., Maj Vincent Franano, Capt John G. Freeman, Col Robert E. Galer (2d), Capt Owen V. Gallentine, Capt George E. Gibson, Jr. (2d), Maj Alexander J. Gillis (2d), Maj Wiley A. Green (2d), Capt W. C. Hall.

Maj Henry Hart, Capt Odia E. Howe, Capt Neal E. Jameson (2d), Maj George E. Jenkins, Maj Hilliary F. Kelly, Maj Merle A. Kime (3d), Capt James E. Kring, Maj Robert J. Larsen (2d), Capt Joseph O. Lynch, Capt Edward H. P. Lynk, Capt Landon C. Martin, Capt Donald L. May, Capt Alden L. McAllister, 1stLt Robert C.

McKay, Maj Lynn E. Midkiff, Capt Willie J. Mixson.

Capt Thomas E. Murphree, LtCol Arthur N. Nehf, Jr. (4th), Maj Herbert A. Nelson, Capt Arthur W. Newendorp, Capt Don M. Perkins, Capt Ewell B. Pinkston, Maj Richard E. Pryor, Maj Robert E. Rickles, 1stLt Edward J. Ruddy, Capt Richard F. Strom (2d), Capt John S. Thompson, Maj William L. Traynor (2d), Capt Robert R. Van Dalsem, Capt Henry Waryek.

Capt James R. Weaver, Col Herbert H. Williamson (2d), Maj Sidney J. Wilson, Jr., LtCol Jack B. Winters, Capt Owen M. Wright, Capt James Wylie.

Navy and Marine Corps Medal

SSgt Lyndolph Ward.

Bronze Star

2dLt Joseph B. Adams, 1stLt Marshall McV. Austin, TSgt Ralph J. Austin, Cpl Sheridan R. Bailey, Capt Thomas W. Barrow, Cpl Raymond H. Beal, Capt Carl H. Benson, Maj William Biehl, Jr., Cpl James W. Blackburn, SSgt John E. Boitnott, MSgt Henry A. Bookhardt, Maj Paul H. Bratten, Jr., Pfc Huey P. Brown, 2dLt William F. Brown, Jr., SSgt Andrew H. Bubanas.

1stLt Robert N. Burhans, 2dLt Orville C. P. Camp, Capt George W. Campbell, Cpl William T. Cannon, Cpl Donald R. Carlton, Maj Theodore R. Cathey, SSgt Jeff D. Chappell, Sgt Luther S. Clark, Pfc William F. Colbert, Cpl Albert J. Cole, SSgt Virgil E. J. Coleman, 2dLt Lee C. Cook, 2dLt Joseph H. Copeland, LtCol David M. Danser, Pfc William H. Davidson.

TSgt William I. Davis (2d), 2dLt Charles N. Dezer, 2dLt James W. Dion, Pfc R. D. Dixon, LtCol Leo J. Dulacki, Pfc John L.

Duncheon, Jr., Pfc James J. Durkin, Pfc Louis M. Eckstein, Sgt Edwin R. Emanuel, Capt Dexter E. Evans, SSgt Donald C. Fehr, Cpl Henry A. Ferguson, Maj James C. Feters, LtCol Frederick R. Findtner, Capt James H. A. Flood, Sgt Roberto L. Flores.

Pfc William W. Freeman, Capt William F. Gately, Jr., LtCol Alexander W. Gentleman, Maj Walter R. Giles, MSgt Kenneth M. Gilham, Pfc Robert G. Glenn, SSgt Billy J. Goodman, Capt Leland Graham, Pfc Cortlen Hall, Pvt Charles E. Hamilton, LtCol James R. Haynes, MSgt Thomas L. Head, Cpl Howard C. Hensley, Jr., 2dLt William P. T. Hill, Jr., Maj Adolph J. Honey.

Maj Adolph J. Honeycutt, Col Russell E. Honsowetz, MSgt Jack A. James, Pfc Ralph James, Pvt Richard L. Jessee, Pfc Cecil D. Jordan, Capt William G. Joslyn, 2dLt Hercules R. Kelly, Jr. (2d), Col Kenneth A. King (2d), Sgt Joe J. Kirkpatrick, Maj William J. Kohler, Capt Casimir C. Ksychewski, Sgt Earl E. Landacre, LtCol Lyle K. London, Pfc Edward Luzzi, Pfc Alvin A. Maclean.

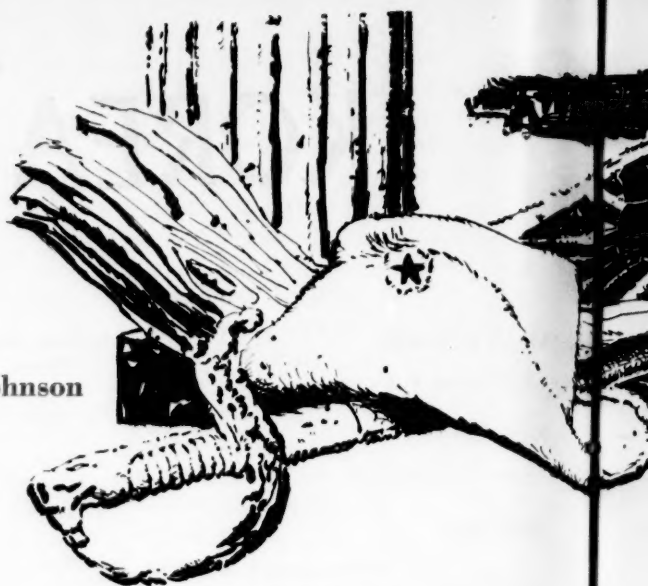
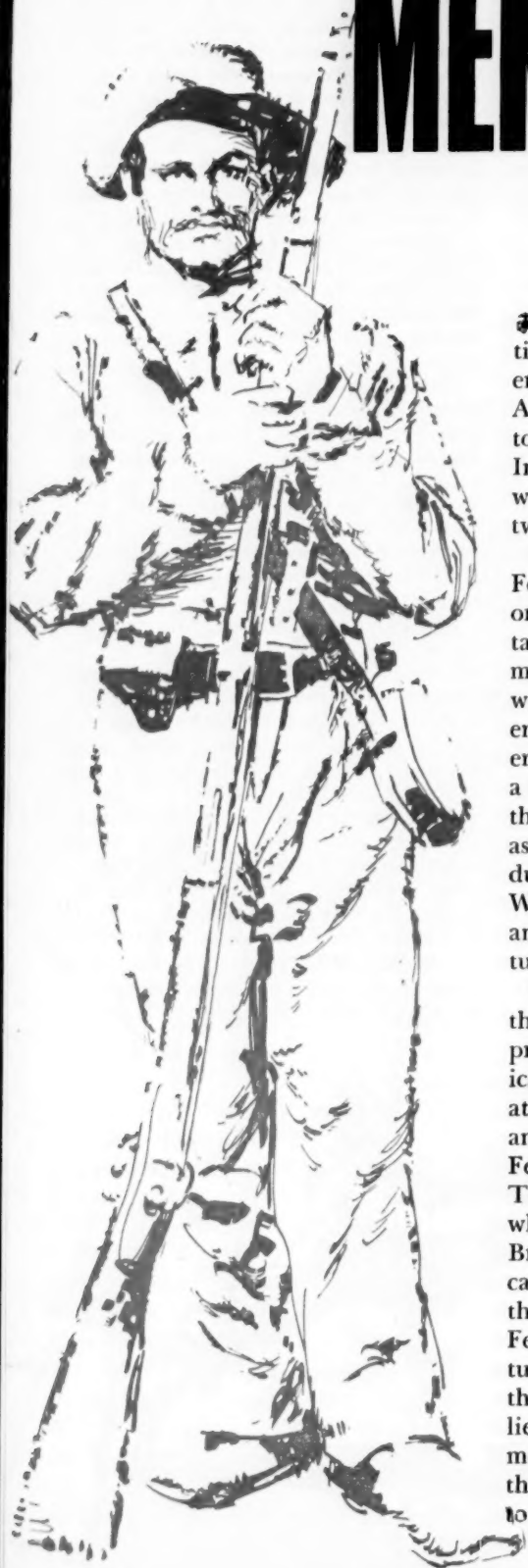
SSgt Lawrence L. Manker, 2dLt John H. Mason, SSgt August H. Matero, LtCol Kirt W. Norton, Pfc James E. O'Connor, 1stLt Wilford E. Overgard, MSgt Conrad B. Packard, Pvt Franklin D. Parr, Pfc Bobby C. Patterson, Capt Bernard W. Peterson, SSgt Antonio L. Rocha, Capt Maurice Rose, Pfc Credo Schwab, 2dLt Lawrence R. Seamon, LtCol James C. Short, Capt Wilbur F. Simlik.

Sgt Barry L. Smith, Pfc Kenneth Sparks, MSgt William D. Spouse, 2dLt Karl W. Suess, 2dLt Thomas S. Strickland, Sgt Peter C. Tsagaris, Cpl Louis J. Vinci, 2dLt Daniel W. Walker, 2dLt John E. Watson, Cpl Lloyd J. Watson, 1stLt John Werkowski, Pfc Gary J. West, Cpl Ronald G. Wildrick.



MORGAN'S MEN

By Capt J. R. Johnson



✦ BOLDNESS CHARACTERIZED OPERATIONS of the Kentucky Partisan Rangers of the Confederate States of America. They captured the first town in Federal territory (Newburg, Ind.) with the help of a stovepipe when their roster included only twenty-seven men.

The mounted Partisans roamed Federal-held Kentucky at will, using orthodox and unorthodox guerrilla tactics and diverting important segments of the Federal Army which was hammering away at the Confederate lines to the south. Their leader, Brigadier Adam R. Johnson, had a background of Indian warfare on the Texas frontier. He had served as a scout for Col Nathan B. Forrest during the first years of the Civil War, had been reared in Kentucky, and was able to lead his fellow Kentuckians over familiar territory.

The Partisans regularly violated the present-day guerrilla warfare principle that insists on local numerical superiority. They merely created the impression of larger forces and captured or defeated superior Federal forces a number of times. The first such instance occurred when the Partisan Rangers (or Breckenridge Guards as they first called themselves) numbered only three men. The three captured a Federal major near Henderson, Kentucky. As Johnson rode away with the captive, he called to one of his lieutenants, "Tell Captain Ray to move his company up to the forks of the road and Bennett to go at once to Slaughtersville." The lieutenant

added his appropriate remarks. After the major was turned free, he quickly reported to Louisville and shortly had a Federal provost guard of eighty men in Henderson.

A few nights later the three attacked this group which was billeted in the courthouse. The *Evansville Journal* headlined, "Provost Guard Attacked by 300 Guerrillas!"

Louisville promptly sent a cavalry regiment (over 300 men) to Madisonville to destroy the property of people suspected of giving aid to the Partisans. The three had now grown to seven. Under cover of darkness, they attacked some of the Federals camped on a farm outside the town. The latter, after some confusion in the cornfields, retreated to town and waited until daylight to return. They examined the many tracks in the earth, gave the Partisans credit for 1,500 men, and went back to Louisville that morning.

✦ DURING A DAYLIGHT skirmish a short time later, a small boy riding a mule, which served as the prime mover for the lone piece of artillery the Partisans had captured, had trouble holding the animal. The mule jerked in and out of the wooded cover several times during the fire fight, and the Federals later credited the Partisans with having a number of cannon. This helped to convince the Federals that the Partisans were much the stronger. They retreated.

The Partisans, hearing of an arsenal of Federal arms stored at Newburg, Indiana, decided to capture it.



Bold and tricky, they captured a town with the help of a stovepipe and ran the Federals ragged

ILLUSTRATIONS FROM BETTMANN ARCHIVE

The band, now twenty-seven strong, fashioned two pieces of "artillery" from a stovepipe, a charred log, and two pairs of old wagon wheels. They placed these in a clearing on the Ohio riverbank opposite Newburg and tied their horses near the pieces. Then, hiding their guns on the bottoms of the ferryboat and skiffs available, they moved across to the town where they quickly captured the arsenal without firing their weapons. Next, 180 soldiers, hospitalized but capable of defending the town, were disarmed and paroled.

THE ARMS WERE THEN carried to the riverbank and loaded aboard the skiffs. A number of the 1,500 Newburg population began milling around, obviously in the mood to start fighting back once the Partisans were out in the stream. Johnson led Colonel Bethel, home guard commander and owner of a store near the river, to the riverbank. "If I'm fired on," the southerner told Bethel, "I'll shell this town to the ground." Bethel examined the artillery behind a low bulwark of sandbags across the river and promptly sent runners to stop any approaching Federal troops. Thus, the Partisans returned home safely, with the *London Times* and other European newspapers giving considerable editorial space to the importance of this first invasion of Northern territory.

Another ruse used by the Partisans to create an impression of large forces was to picket a number of roads throughout their operating



Federal wagon trains—an answer to Partisan supply problems

areas. Scouts or recruiting officers for the Partisans would stop all travelers on main roads and demand their credentials. Because of this, a number of reports coming into Federal Army headquarters at the same time would give the impression that the Partisans had many military camps over a wide area.

Later, as part of General John H. Morgan's cavalry, the Partisans attacked the Federals at three different places on different roads near Lebanon, Tennessee. The Federals, surprised at an attack on such a disagreeable winter night, believed that Morgan's entire cavalry division was attacking and drew in all their pickets. They spent the night frantically

preparing the town for an expected general assault the next morning. The Partisans meanwhile had slipped away to rejoin Morgan who headed toward another destination.

This business of attacking enemy pickets at several places at once worked many times for the Partisans. It became a standing operating procedure. The pickets were driven into the main body with much firing and yelling, and intermittent fire was thrown at the enemy from many sectors. On occasion, Federal units, believing themselves completely surrounded and overwhelmed, surrendered.

An important mission of the Partisans was the cutting of Federal lines

of communication and supply which stretched through Kentucky and Tennessee. Bridges were burned, supply trains captured, and enemy gunboats captured or lured away.

Because of their mobility the Partisans were able to get in and out of situations which another force might not have considered feasible. Several hundred Partisans descended on a wagon train on the Lebanon-Murfreesboro, Tennessee turnpike and captured about 100 wagons, although they were heavily guarded. Seventy wagons were burned after one broke down and blocked a narrow defile. The Partisans drove off the remaining thirty.

This cutting of communications took on a strategic aspect after Grant's policy of pounding away at Lee's army had reduced it to the "thin gray line." The Richmond war office ordered Johnson to take fifty men into Kentucky and organize a large enough unit to drain off some of the forces which Lee had at his front.

JOHNSON SOON had four regiments in the process of formation in Kentucky, with forty men commissioned to raise a company each. At the same time he received a communication from the Sons of Liberty in Indiana (Confederate underground) that 10,000 men would be furnished to the Confederacy from Indiana, Illinois, and Ohio. The over-all plan was to capture base towns such as Louisville, Cincinnati, and Evansville, Indiana and make a grand sweep (after the manner of Sherman's Georgia march) through Indiana and Illinois to free Confederate prisoners of war at Camp Morton near Waverly, Indiana and Camp Douglas near Chicago. The plan failed due to Federal counter-moves and capture of key men in the Sons of Liberty organization.

The Partisans had amazing success at recruiting men in occupied territory. In 1862 Johnson brought into Confederate service twenty-two companies from southern Kentucky which subsequently became a brigade under General Morgan.

Recruiting was done rather simply. There were many southern sympathizers in Federal-held Kentucky (as well as adjacent Northern states). Recruiting officers were sent to their home counties to contact

people they knew to be friendly to the Confederate cause. Men were contacted, recruited, and told to meet at a rendezvous.

In friendly areas, the newspapers were utilized to carry recruiting notices. Handbills were posted. Proclamations were published. If mounts and arms were not available, men were requested to bring their own. Johnson recruited, trained, and mounted seven-hundred men at Morristown, Tennessee using as a nucleus the men who had escaped after General Morgan's cavalry was cut up at the end of their sweep into Indiana and Ohio.

On August 15, 1864, Johnson sent an official report to Richmond which included, "Up to today I have recruited, mounted, armed, and equipped 1,870 men . . . Have at the present time the Ohio River blockaded from Henderson, Kentucky to Mound City, Illinois, and hold undisputed possession of eight counties in southern Kentucky."

The Partisans had a standing operating procedure for each man which went into effect immediately when ambushed. In September 1863, Johnson, encamped at Morristown, received an order to clean up the bushwhacker situation in the mountains between that city and Asheville, North Carolina. The bushwhackers had been killing the men guarding the forage trains.

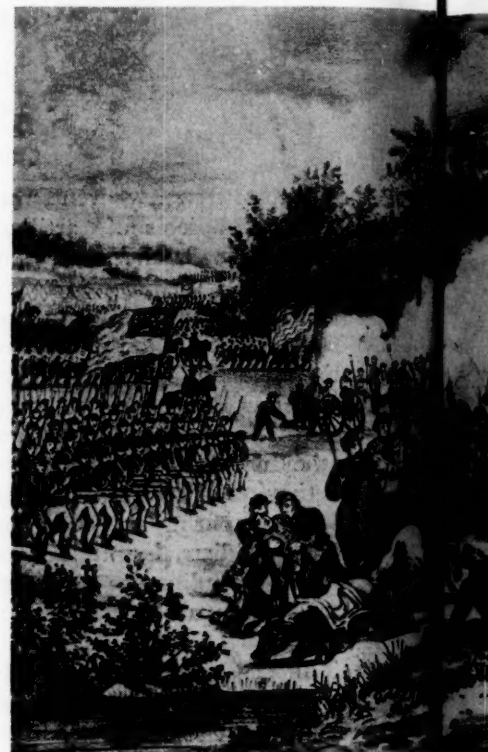
Johnson sent one-hundred men (fifty-man main body, two twenty-five-man flank guard detachments) into the mountains. As soon as a shot was fired from cover, every man immediately charged the spot. As a result, the Partisans killed thirty bushwhackers, took fifty-six prisoners and thirty-seven horses, and lost only one killed and five wounded. Word got around the mountains and bushwhacking dropped off considerably.

THE PARTISANS were able to maintain security of their own forces fairly well throughout their operations. When hard pressed, Johnson would, as a last resort, order the men to return to their home counties until notified to meet days or weeks later at a rendezvous.

In camp, security was maintained not only by pickets but by roving patrols ranging far out from the vicinity under the leadership of men who knew the country. A coordina-

ting officer for these scattered parties had a plan for contacts with each so that the parties could be mustered on short notice. The pickets kept all roads near the camp under surveillance and stopped all travelers.

One rule which Johnson never allowed to be violated was that Partisans would never sleep in houses. The only instance of the enemy surprising a sleeping Partisan occurred before this rule was put into effect. Even tents were out. The Partisans



Chickamauga—the Partisans

liked the mobility afforded by lack of tentage. They did away with the company headquarters wagon used for carrying tents and cooking gear and even hid cooking utensils when beginning an important movement.

The Partisans employed numerous ruses to get themselves out of tight spots. Once, while operating as part of Morgan's command, they were forced to fall back. A few companies of Partisans under LtCol Martin (Johnson's right hand) fought a delaying action. Behind Martin was a low open valley through which his men had to withdraw and which the Federals could sweep with artillery. Martin spotted a low wooded hill

to one side which the Federals could reach with their batteries. He galloped toward the oncoming enemy, waving his hat, then rode slowly toward the hill. The Federals thought he was trying to lead them into a trap. They stopped. Throwing a skirmish line forward to the foot of the hill, they prepared to overrun a possible ambush. Martin waited until his men were clear of the open valley, then broke away to join them.

Attesting to the mobility of the



Morgan's raiders—the command stayed well mounted

force them in on the main body which would usually move quickly to defend itself. The Partisan main body would then move on past the enemy without trouble.

The scouts were all important in a war of movement. They were thrown out well to the front and flanks. On dark or stormy nights they built guide fires along the route. They arranged "surveys" of Partisan transportation, i.e. "horse swapping," so that the command stayed well-mounted.

The habit of travelling light was so well ingrained into the Partisans that they were astounded, along with Forrest, when Bragg (Confederate CG) failed to follow up the victory at Chickamauga. After three days of battle the Federals were retreating toward Chattanooga in a disorganized state. Bragg held back, giving his reason for stopping as "inadequate supplies and transportation."

The Partisans never forgave Bragg for that. They swore that the battles of Lookout Mountain and Missionary Ridge would never have been fought, and that Sherman would not have marched through Georgia if Bragg had not been afraid to subsist on half rations and to requisition farm wagons for his transportation.

Whenever the Partisans found themselves pursued so closely by Federal cavalry that they were in danger of being overrun, they employed a trick that often halted their opposition: they shot the enemy's lead horses.

One Capt Taylor considered it a waste of powder to shoot a man in such a situation. He remarked that

a dead horse was the best breastwork in the world against cavalry, that it was almost impossible for a trooper to force his mount past a dead horse.

In regard to prisoners of war, the Partisans took hundreds but never kept them over a few hours. They were stripped of arms and equipment and paroled.

Collecting intelligence was normally an easy matter. The Partisans maintained an army of southern sympathizers in northern territory who provided eye-witness information. The scouts provided much, local newspapers some; and agents, who slipped in and out of Federal camps, filled in details. Johnson himself once traveled as a merchant with Buell's Federal forces.

The Partisan Rangers gave valuable service to the Confederacy. They upheld, with one exception, and improved upon the accepted principles of guerrilla warfare: maintenance of mobility, concealment, movement after dark, and infiltration. The exception was the principle of local numerical superiority. This they disregarded. But they achieved this principle indirectly by creating the impression of local numerical superiority.

The Partisans, reorganized before Chickamauga under the name of "Morgan's Men" in tribute to the general (a Federal prisoner of war at the time) received their proudest citation the morning after that battle. Gen Forrest rode down their lines with hat in hand to yell, "Any man who says that Morgan's Men are not good soldiers and fine fighters tells a damn lie!"

US & MC

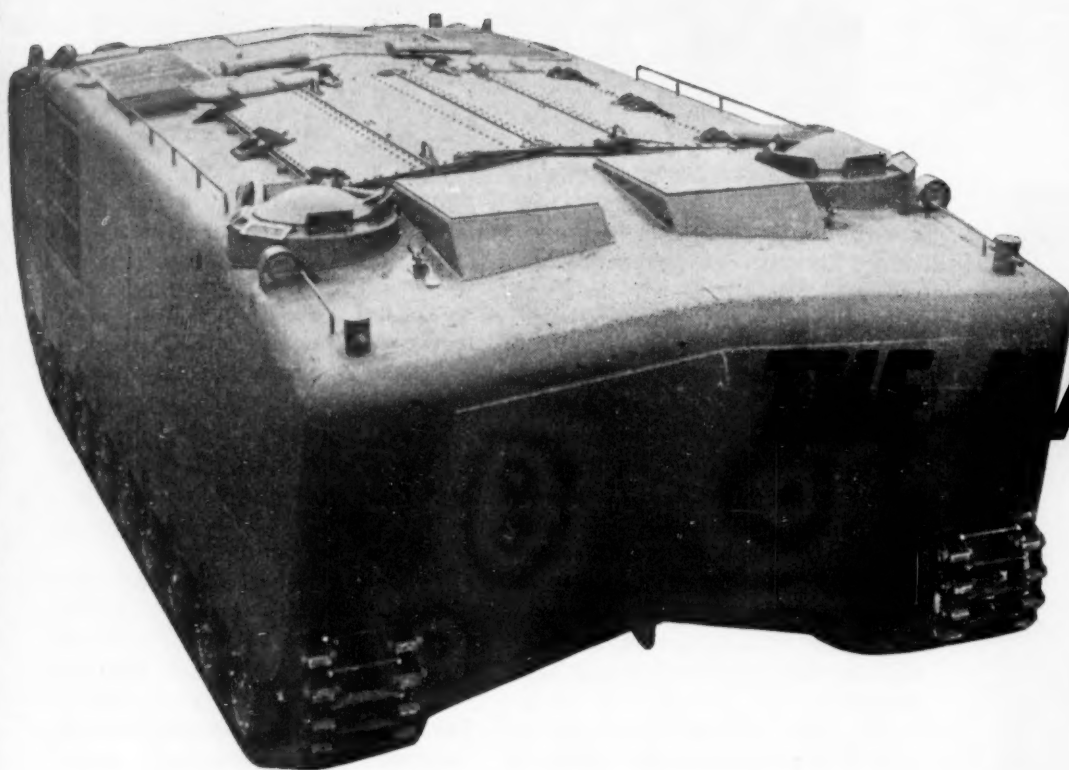


Partisans never forgave Bragg

Partisans was the understatement made by Col James R. Holloway who commanded a cavalry squadron in Crittenden's division of the Federal Army, "I tried to keep him (Johnson) down and regulate him so long as I had to meet his forces. But after following him across the borders of Kentucky, through Indiana and Ohio in General Morgan's great raid. . . . I returned to Kentucky."

On many occasions while moving across country the Partisans would find themselves blocked by encampments of Federal troops. The Partisan scouts, reinforced, would drive in hard on the enemy pickets to

*Out of the swamps of Florida came the amphibian that was to
dominate the war in the Pacific and carry the Marines to victory*



THE MARINES'

It was JULY 1942. THE 5TH Marines, reinforced, had just arrived in Wellington, New Zealand, and unloading was in progress. Some "Yanks" had already made their appearance in this friendly country, but the 5th was the first American ground unit to arrive and the people were most interested in the troops and their equipment. Standing along a rocky beach bordering the harbor was a curious group watching a column of silvery vehicles churning their way through the water. The column turned left and headed inland. Individuals in the crowd began to express concern for the "boats" because they appeared about to run aground. Suddenly the lead vehicle grounded, snorted, and waddled ashore. The crowd scrambled away, and soon 'midst Ohs! and Ahs! the first amphibian tractors to hit a foreign beach had landed. The amphibian was certain-

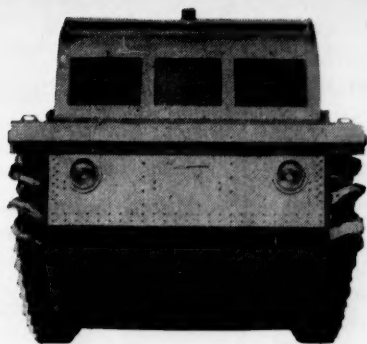
ly a peculiar vehicle, and that day in Wellington was in the nature of a holiday. It so happened that July 1942 was the first anniversary of the military model of the machine. The first LVT1 had left the factory in July of 1941, exactly one year before.

Perhaps no item of equipment is now associated with a military service as closely as is the amphibian tractor with the United States Marine Corps. A review of the progress made in the technique of the amphibious assault during the last war clearly shows the increasing recognition granted to the many capabilities of this vehicle. Gen H. M. Smith, USMC in his book *Coral and Brass*, states (on page 133) "After Tarawa I made up my mind that all future landings would be spearheaded by amphibious vehicles, either the open-decked amtrack . . . or amphibian tanks. . . ." The validity of the general's remarks may best be





LVT(A)1 — had a 37mm



Roebling's Alligator

3' AMPHIBIAN

By LtCol Victor J. Croizat

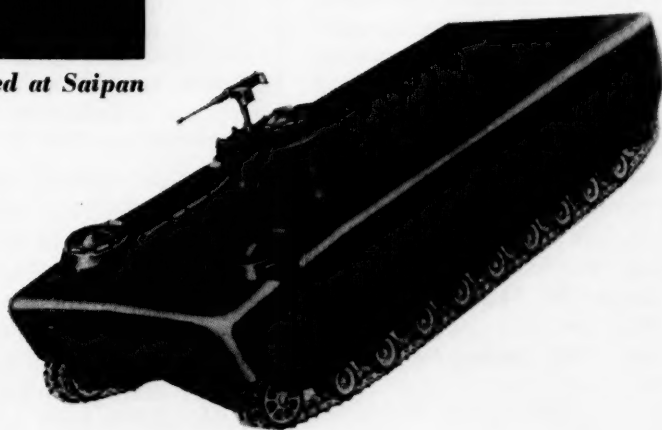


Many models were tested



LVT(A)4 — their 75s helped at Saipan

LVTH6 — a 105 and a new hull



LVT3C — lids gave added protection



emphasized by the fact that 18,620 amphibian tractors of various types were produced between 1941 and 1945.

The fact that the amphibian permitted landings across the reef-fringed beaches of the Central Pacific islands was in a manner a guarantee of success in that campaign. The armor of the LVT protected troops from small-arms fire and shell fragments. When armed with a major caliber weapon the LVT could provide continuing close support fires to the infantry. Now with the advent of atomic weapons the value of the amphibian tractor continues. With the addition of overhead cover to the cargo type the protection to troops is increased and shielding from certain effects of atomic weapons is provided. The landing force is also able to deploy at sea and effect penetrations inland without having to pause on vulnerable beaches.

To tell the full story of the amphibian tractor it would be necessary to review most of the operations in the Pacific as well as several in Europe. That is not possible here. This article will thus be limited to a consideration of those operations in the Pacific where either type vehicle first appeared, or where a new technique in employment was first attempted.

The Pre-War Period

In truth, the idea of an amphibian tractor was not new. As early as 1924, J. Walter Christie had developed an amphibian tractor which the Marines, ever eager in things amphibious, had taken on Fleet Problem No. 4 at Culebra.¹ While satisfactory in tests on the Hudson and Potomac Rivers, this craft proved unseaworthy in the ocean.

In 1927, six modified versions were used in China.² Later, Mr. Donald Roebling, working in the middle '30s, developed an amphibious vehicle which he intended to employ for rescue work in the swamp areas of Florida. *Life* magazine ran an article on this machine in October 1937. Once again the Marine Corps entered the story.

In late 1937 Major General L.

¹The U. S. Marines and Amphibious War by Isely and Crowl.

²History of Landing Vehicle Tracked, SecNav Continuing Board for Development of LVT, Dec 1945.

The following information is intended to clarify some of the confusion in terminology referring to the amphibian tractor.

1. The Joint Dictionary of United States Military Terms (June 1950) refers to the amphibious tractor. U.S. Marine Corps Tables of Organization refer to amphibian tractor battalions. Both forms appear to be in current usage and nothing in the dictionary indicates one is better than the other.

2. FM 21-30 lists the abbreviation of the amphibian tractor as "am-track." This is presumed to be the official abbreviation.

3. Originally, cargo LVTs were built of sheet steel while those LVTs equipped with a heavy weapon in a turret were built of light armor plate. Hence, the term "armored" was used to designate LVTs carrying major-caliber weapons. After the Tarawa operation in November 1943, all cargo LVTs were fitted with some type of armor. Thus, while all types of LVTs could then be considered as armored, the term "armored" was still used to refer only to the turret types. The "armored" amphibians include the LVT(A)1 with 37mm gun; the LVT(A)4 and LVT(A)5 with the 75mm howitzer, and the new LVT(H)6 with heavier armament. The only exception to the above rule is the LVT(A)2 which was a cargo LVT built of integral armor and was exactly like the regular LVT2 in appearance.

4. The various nicknames given to LVTs were all used for cargo LVTs. The term "Alligator" was applied to the LVT1. The "Water Buffalo" was used to designate the LVT2. The LVT3 was called the "Bush-master" but this latter name never enjoyed wide popularity.

5. The turret-type LVTAs were formed into Armored Amphibian Battalions in the Marine Corps. In the Army these vehicles were grouped into Amphibian Tank Battalions. In both services the cargo LVT units were called Amphibian Tractor Battalions.

McC. Little, USMC, Commanding General of the Fleet Marine Force, and his chief of staff, Colonel E. P. Moses, were conferring with Rear Admiral E. Kalbfus, USN, with reference to the forthcoming Hawaiian Area maneuvers.³ In the course of a dinner during that period the admiral is said to have mentioned the

³Interview with E. E. Linsert (LtCol USMC, ret).

article in *Life* magazine, expressing the thought that such a machine might have some interest for the Marine Corps. Gen Little was quick to grasp the idea and had Col Moses send the article to the Major General Commandant, General Holcomb, with a recommendation. In due course of events, in 1938, Headquarters Marine Corps asked the Equipment Board in Quantico to look into the matter.

Major John W. Kaluf was at that time the Secretary of the Equipment Board. In September of 1938 he visited Mr. Roebling in Florida. When Kaluf arrived he found that Roebling had stripped down his first model and was busy making modifications. The machine looked promising but Mr. Roebling did not appear interested in applying a machine he had developed for humanitarian purposes to a military end. No one could foresee at that time the immense value the machine would have during the war for evacuation of wounded. In spite of this obstacle, Kaluf was impressed by what he saw. In January 1939, he returned to Florida and there witnessed the third model in operation. The report he prepared as a result of this second visit was favorable and was referred to BrigGen Moses who had by then become President of the Equipment Board. The general agreed with Kaluf that the vehicle as it stood was not suited to hard military use but that it was of potential value and that necessary modifications could be made.

Major Kaluf's tour in Quantico was about to end when he learned that Major E. Linsert would be his relief. He accordingly wrote (in April of 1939) a long letter to Major Linsert in which he detailed the story of the Roebling "Alligator." Linsert arrived in Quantico, took over his duties, and in September he and General Moses went to Florida. There they witnessed model number four in operation. Perhaps of more importance, they succeeded in convincing Mr. Roebling of the military value of his machine and he agreed to redesign the tractor to include military characteristics.



By January of 1940, Roebling had designed a machine with the desired military characteristics; he even had sketched a turreted vehicle, the plans for which Major Linsert eventually completed. The point had now been reached where the question of funds was raised. Roebling had used \$68,000 of his own money in developing the machine. He agreed to build one for the Ma-

the machine was completed. It is heartening to learn that when Roebling found his costs to be \$16,000 he wished to return the remaining \$4,000 to the Navy. After some difficulty of an administrative nature he finally succeeded in having a check for this sum accepted by the Navy Department.

The "Alligator," as the first LVT was called, arrived in Quantico on

of 100 LVTs. The Food Machinery Corporation of San Jose, California, had been contacted and they had agreed to turn over their Dunedin, Florida plant for the production of those machines. The U. S. Army also came into the program at this time and was to remain an active participant throughout the war.

After this whirlwind climax Sgts Raper and Gibson took the Alligator to Cuba. There, under the supervision of Captain V. H. Krulak, they conducted a series of field tests. These tests resulted in a number of recommendations which influenced the designs of the first LVT. In early 1941, the Alligator returned to Quantico. There, at the Training Center, a small amphibian tractor detachment was formed. This detachment, headed by Major W. W. Davies, moved to Dunedin, Florida, in the spring of 1941. At Dunedin, a stone's throw from the Food Machinery Plant and a few miles from Donald Roebling's home, the detachment set up a training center for drivers and mechanics. To this small unit was delivered the first LVT to come off the assembly line. Shortly thereafter we were at war.

To most Americans the memory of Pearl Harbor Day is intimately associated with a wealth of detail covering their exact movements at the time. For a number of Marines, their story would run something like this:

"We had received orders to join the 1st Marine Division at New River, North Carolina. We were to become the first amphibian tractor company to join the FMF. We were all packed and spending our last day saying goodbye to our friends in Dunedin. During our round of farewells the word reached us—the Japs were attacking Pearl Harbor! The next morning in full field equipment we marched through Dunedin to the railroad station. Large crowds gathered as we went through town, and as we embarked on our train the voice of the President of the United States could be heard over many radios announcing Congress' declaration of war upon our enemies. It was coincidence—but it was dramatic. We were carrying out orders, but for the civilians in the throng we were Marines moving out,



Marines were quick to make full use of the armor

rine Corps at an estimated cost of \$20,000. Unfortunately, Headquarters Marine Corps had no funds available for such a purchase. Thought was given to obtaining funds from another source. As a "land vehicle" no funds could be procured, but perhaps the money could be raised if the machine were considered a "boat." The matter was put to the Bureau of Ships and in March 1940, \$20,000 was allotted from the landing boat fund for the construction of a "boat." Roebling immediately started work on what was his fifth model; actually model number one for the government.

Major Linsert believed it would be desirable to send some Marines to Florida while the craft was being built. He obtained permission for this plan and selected two men in Quantico with the experience required. They were Sgt Clarence H. Raper, a tank man, and Sgt Walter R. Gibson, a man with considerable experience in boat handling. These two proceeded to Florida in September 1940.

Toward the last of October 1940,

a Tuesday. That day a call was received at the Equipment Board indicating the Commandant's intention of inspecting the vehicle on Thursday. Major Linsert, with Sgts Raper and Gibson, hurriedly selected a site near Chopawansic Creek for their demonstration. Needless to add, they were duly impressed with the vital necessity of making the show a success—this was their big chance to "sell" the LVT. Thursday came and with it Major General Holcomb, accompanied, quite unexpectedly, by a large following of "Very Important People" including representatives of both the Army and Navy.

The demonstration was a success—the admirals and generals were taken for rides without mishap. Later in the day the Alligator did get stuck in the mud, but fortunately this had little effect on the favorable impression already created. Thus the LVT program was firmly launched on 5 November 1940.

On Saturday of that week, the Bureau of Ships had given Roebling a "letter of intent" for construction

ready to go, even as war was being declared. We were certainly living up to the tradition of 'ready to fight.'"

World War II

In December 1941, Company A of the 1st Amphibian Tractor Battalion was activated at New River, North Carolina. This was the first such company in the Corps and was commanded by Captain W. K. Enright. Shortly thereafter, on the West Coast, various elements of the 2d Amphibian Tractor Battalion were formed. The flow of vehicles was slow at first but as the number of units activated increased, sufficient machines became available to permit some participation in maneuvers. Early in 1942, detachments of the 1st Amphibian Tractor Battalion joined in exercises in the Solomon's Island area of Maryland, a strangely prophetic name.

Throughout this period the LVT was very much of a novelty. Its anticipated uses were purely logistical and the training carried out was simply in the nature of familiarization with operating techniques.

The first LVT unit to move overseas was Company A of the 1st Battalion. This company left Norfolk in May 1942 as part of the 5th Marines, reinforced; destination Wellington, New Zealand. Shortly after arrival in New Zealand, planning for the Guadalcanal operation commenced. The plans called for landings on Guadalcanal proper and on the adjacent islands of Tulagi, Gavutu, and Tanambogo. The 1st Amphibian Tractor Battalion (less one platoon) was to support the Guadalcanal landing. The detached platoon was assigned, together with Company A of the 2d Amphibian Tractor Battalion, to support the landings on Tulagi, Gavutu, and Tanambogo. The 1st Marine Division had dispersed amphibian tractors throughout its infantry elements to provide added means for logistic support. Since the limited repair and maintenance facilities of the amphibian tractor battalions were concentrated at battalion level, the result of this dispersal of vehicles was that the various detached elements were incapable of anything but the most elementary of preventative maintenance.

The rehearsal for this operation



LVT3 — first used at Okinawa

took place at Koro Island in the Fijis. There the Commanding Officer of the 5th Marines, Colonel L. P. Hunt, expressed concern over the fact that his landing area on Guadalcanal was flanked on the right by a river. While this obstacle afforded initial protection, it was necessary to cross it rapidly once ashore. The problem was referred to the commander of the engineer company supporting the regiment, Captain A. S. Igleheart, and to the LVT company commander. Shortly thereafter the engineers and LVT men on the AKA *Bellatrix* were at work. Utilizing four LVTs of Lt Harry Marshall's platoon, these men soon rigged an overhead platform on each of these LVTs with a ramp device hinged fore and aft. The plan was to drive the vehicles into the river, drop the forward ramp on the far bank and the rear ramp on the friendly bank, thereby bridging what was fortunately a narrow stream.

The problem was not yet completely solved. There remained the need for a reconnaissance group to investigate suitable bridge sites, reduce the reportedly steep bank by demolitions, and mark these sites for the oncoming machines. The watchword as always was "Speed." Warrant Officer Overton with a volunteer detail moved into the beach with the early waves. Once ashore, these men, lugging heavy demolition charges which later proved unnecessary, selected four bridge sites and marked them with red flags. Meanwhile, Platoon Sergeant Harry Elliot (KIA in an LVTA in June 1944

at Saipan) had been moving into the beach with his four LVTs. Since these vehicles were slow, they had been launched early. For many Marines emerging from below decks, their first sight of Guadalcanal included the sight of these insolent machines slowly making their way ashore far ahead of anything else.

FROM THE VERY beginning the LVT proved its versatility in impromptu roles; its reputation was growing. It carried supplies under fire to the troops at Gavutu; elsewhere it evacuated wounded, moved cargo, displaced artillery, and formed an integral part of bridges. Ultimately the problems of maintenance and the inherent mechanical weaknesses of the machine severely reduced the number of operational vehicles. Their machine guns began to find their way into infantry units. And it wasn't too long thereafter that the crews found themselves occupying defensive positions to assist in holding the thin perimeter around Henderson Field.

In the United States on 30 October 1943, the Secretary of the Navy formed the "Continuing Board for the Development of the Landing Vehicle, Tracked." Under its auspices new LVTs were developed. The LVT1, never fully satisfactory particularly in its track and suspension system, was already giving way to an improved model, the LVT2 called the "Buffalo." This latter machine, larger and with greater power, was to form the basic design and, with modifications,

ruled the Pacific beaches for most of the war. At Bougainville in November of 1943, the LVT2 first saw combat but it wasn't until the Guam operation in 1944 that the last LVT1 was used. The story of the LVT in the remainder of the Solomons campaign followed the pattern of Guadalcanal. It was used to provide logistic support. General Rupertus was so pleased with its performance in the mud of Cape Gloucester that he recommended against making the LVT a tactical vehicle because such a role would reduce its cargo-carrying capacity.⁴

The shores of the South Pacific islands were accessible to landing boats, but in the Central Pacific the island shores were coral fringed. It was after the first Central Pacific landing at Tarawa that Captain H. G. Lawrence is reputed to have said, in reference to LVT units, (and in somewhat more colorful language) "We have now gone from supply troops to shock troops."

General H. M. Smith asserted, "Without the amphibian tractor it is believed that the landing at Tarawa would have failed."⁵ The story of this epic landing is too well covered elsewhere to warrant repetition here. However, it might be well to recall that the 2d Amphibian Tractor Battalion initially had only seventy-five unarmored LVTs. The 2d Marine Division's novel plan to use LVTs to land the assault troops over the reef required more of these machines than were available. Their new role also indicated that all should have some form of armor; this latter problem was ultimately solved by a free use of boiler plate.

Additional machines were requested. A provisional company formed in the 2d Mar Div was sent to Samoa to meet fifty LVTs being dispatched from the U.S. The fifty LVTs had been hastily assembled and were accompanied by a detachment drawn from the 1st Armored Amphibian Battalion at Camp Pendleton. This amalgamated unit managed to arrive at Tarawa on 20 November 1943, D-day. The situation was most difficult. Never before had the LVTs been used in tactical roles

in the assault. The battalion had never worked together as a unit. The assault troops were embarked in transports and had to transfer from LCVPs into LVTs at sea. Considering the adversities that faced the amtracks, the accolade granted by Gen Smith appears well deserved. The casualties of the 2d Amphibian Tractor Battalion were high and included Major H. C. Drewes, the battalion commander, killed in action on 20 November 1943.

The lessons of Tarawa were applied as rapidly as they could be evaluated. The 4th Marine Division, readying for the Marshalls operation, already had the 4th Amphibian Tractor Battalion, commanded by LtCol C. C. Coffman. Soon after Tarawa, authority was received to organize the 10th Battalion, reinforced by Co A of the 11th Amphibian Tractor Battalion. The 1st Armored Amphibian Battalion, commanded by Major L. Metzger, was also assigned to the 4th Marine Division. This unit was equipped with the LVT A1 which was a cargo LVT hull mounting a 37mm gun in a turret, the same type of turret then found on the light tank. (In pass-



LVT A5 — power turret and a gyro

ing it may be noted that the U. S. Army had requested that some of the new cargo LVT2s, currently made of sheet steel, be constructed of armor plate. When built, these cargo machines were designated LVT-A2 and were the only cargo vehicles to have an "A" designation. The first combat employment of these machines was by the U. S. Army at Arawe in December 1943).

The story of the Marshall Islands operation also is too well covered

elsewhere to merit repetition; yet some points deserve emphasis. The amphibian tractor units used by the Marines were new. Thirty days before sailing from the U. S. the 4th Amphibian Tractor Battalion had been split to form the 10th and Company A of the 11th Battalion. Crews were inexperienced and units lacked cohesiveness. The plans for the landing again required the transfer of troops from transports to LCVP to LVT. The scheme of maneuver, involving the seizure of many islands, was complicated. Naval personnel had had little experience with these machines, particularly in their new assault role, and the mechanical limitations of the LVTs were not always taken into account. For the second time in a matter of weeks, amphibian tractor units were asked to assume roles for which there was no precedent and for which the time to train had to be severely curtailed. The Army units landing on Kwajalein Island, in the south of the Marshall atoll, were also supported by LVT units. However, where the Marine Corps had had to create new LVT battalions, the Army had been able to convert existing tank battalions to LVT units. Thus the problem of employing LVTs was in some measure simplified for the Army.

While the newly-won Marshalls were being developed and new operations were being planned, the evolution of the LVT continued. Both the LVT1 and LVT2 had engines in rear. Cargo space was restricted and, what was worse, cargo had to be raised over high gunwales for unloading. Troops had a long drop to the ground and the type of cargo which could be carried was limited to that which could be manhandled. A number of companies in the United States were working on a ramp-type LVT. Food Machinery Corporation, using the basic LVT2 design, moved the radial Continental engine forward, added a ramp to the rear and thus produced the LVT4. These machines first made their appearance at Saipan in limited numbers. In the field of armored amphibian tractors it had been learned in combat that the 37-mm gun in the LVT A1 was too light. Accordingly, the turret from the motor gun carriage M-8 was sub-

⁴The U. S. Marines and Amphibious War by Isely and Crowl.

⁵Ibid.

stituted. This new turret, open on top, housed the 75mm howitzer. When placed on the LVT hull, it became the LVT A4. This machine, too, first saw combat at Saipan.

In the field of tactical employment, 1944 saw additional innovations. First, in early 1944, Marine LVT battalions, originally organic to divisions, were redesignated corps and later FMF troops. Secondly, the V Amphibious Corps SOP, published on 12 April 1944, was the first attempt to standardize procedures for the employment of LVTs. Naval officers in the amphibious forces became familiar with requirements and characteristics of these vehicles. The LVT units themselves were shaking down into smooth working organizations and the assault troops were becoming familiar with what the machines could do for them. The maintenance problem was more fully appreciated. Repair and maintenance units were increased in number and size. Certain LVTs were converted into recovery vehicles and self-propelled machine shop units capable of on-the-spot repairs. Planning staffs began to include these specially modified maintenance vehicles in lift requirements. Other machines were designated command LVTs and had multiple radios installed for use by assault unit commanders. Later, LSTs were designated as LVT repair ships for utilization at target areas after the assault.

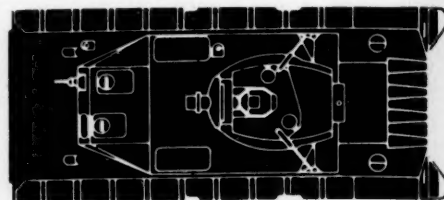
● AT TARAWA one amphibian tractor battalion, reinforced, had supported the landing of the 2d Marine Division. At Roi-Namur the landing of the 4th Marine Division had been supported by two amphibian tractor battalions, one additional LVT company, and the 1st Armored Amphibian Battalion. At Saipan in June 1944, the ever increasing importance of these units was evidenced by the employment of six cargo battalions and two armored amphibian battalions in support of the two assault divisions. The Marines furnished the 2d, 5th, and 10th Amphibian Tractor Battalions and the 2d Armored Amphibian Battalion, while the Army provided the 534th, 715th, and 773d Amphibian Tractor Battalions and the 708th Amphibian Tank Battalion. (The Army used a different designation

for their LVT A battalions than the Marine Corps.) Several of these units had already participated in operations. Those that had not yet been in combat had benefited by the opportunity to train and study reports of previous landings. To add to the favorable situation the naval elements were rapidly becoming familiar with the peculiar requirements of these machines.

At Saipan, the 4th Marine Division introduced a variation to the assault landing technique. It was planned that the assault waves of infantry embarked in LVTs and accompanied by LVTAs would proceed without interruption directly from the line of departure at sea to the so called 0-1 line inland. Reserve battalions would follow to positions inland in rear of the assault battalions, and would then mop up. In fact the Northern Troops and Landing Force (the V Amphibious Corps) had planned on an initial penetration inland by both assault divisions. Because of terrain obstacles the 2d Marine Division had requested and received permission to debark on the beaches. The 4th Marine Division, however, went ahead with the plan as initially directed. Because of the configuration of the shore line, the 0-1 line in the zone of the 4th Marine Division was 1,400 or more yards inland from the beaches.

Accounts of what actually happened are sketchy. An Army report⁶ states that thirty-three LVTAs reached the 0-1 line on the 4th Marine Division front. Isely and Crowl in their *U.S. Marines and Amphibious War* present substantially the same story as is found in the Marine Corps historical monograph on Saipan. The picture portrayed in these latter accounts is one of only partial success. The initial penetrations of the four assault battalions in the order of landing from right to left were as follows: 1st Battalion, 25th Marines, landing on the extreme right, debarked on the beach; about half of the 2d Battalion, 25th Marines was carried 500-700 yards inland before debarkation; most of the 2d Battalion, 23d Marines debarked 100-200 yards inland

but three LVTs and five LVTAs reached 0-1; of the LVTs in the 3d Battalion, 23d Marines' zone, eight cargo and three "armored" reached 0-1. The deepest penetrations were not made in sufficient strength to be held and the troops had to fall back temporarily. In the strictest interpretation of the orders given it may be concluded that the plan failed of its full realization. However, careful study reveals that the concept of the assault, while only partially executed, yielded substantial results. The volume of enemy fire between the reef and the beach area during the landing was



extremely heavy. The echelonment of LVTs in depth ashore served to draw enemy fire away from the beach areas. The troops that reached the 0-1 line or its vicinity were subjected to fire which would otherwise have been directed on the beach areas. Enemy units in the beach areas were bypassed with a consequent reduction in their effectiveness. Thus in some measure the continued landing of our troops and equipment was facilitated.

It can be concluded that the LVTs and LVTAs scattered irregularly between the beach and the 0-1 line on a front of some 2,500 yards served to disrupt the Japanese defenses in the 4th Marine Division landing area. One last point should be considered. A total of 719 LVTs and LVTAs participated in the assault. In the initial assault only nine cargo LVTs and three LVTAs were hit by shellfire and knocked out. The majority of these losses occurred while the amtracks were waterborne or stopped at the beach line. Of ninety-eight cargo LVTs assigned to land the two assault battalions of the 23d Marines, only one was hit on the way into the beach and none was hit in the movement inland toward the 0-1 line.

The significance of this episode was slighted in the press of other landings. Yet, there is in this tale

⁶U. S. Army Historical Division pamphlet, *The LVT and LVT A during the Saipan Operation*.

the seed of the concepts now being studied for the landings of the future. Vulnerability to atomic weapons has imposed a dispersed pattern of amphibious attack. Thus more and more does the concept of the mechanized assault come into focus. No longer can we expect to mass forces and equipment in shallow beachheads. Rapid displacement inland is essential and this requires mechanization. Further, vulnerability to the effects of atomic explosions is greatly lessened by covered vehicles. These and other factors are serving to condition the concept of future operations. Thus, the mechanized amphibious assault employed at Saipan in 1944 may well be considered the forerunner of what may come in the future. To this new development, the LVT and LVTA will continue to provide the means required for success.

The Marianas operation taught other lessons. The LVTA had been initially conceived primarily as an amphibious tank. It had in fact been fitted with a tank turret. In the Marshalls its 37mm gun had done some good work but a bigger gun seemed desirable. In the Marianas both the 37mm LVTA1 and the 75mm howitzer-carrying LVTA4 had been given a long battle test. As a tank, the vehicle left something to be desired. Its high silhouette, thin armor, and low power made it particularly vulnerable. Even the new model mounted a howitzer and not a gun which is the real tank weapon.

Major L. Metzger,⁷ still commanding the 1st Armored Amphibian Battalion, sailed from Guam impressed with his latest experience. He appreciated the fact, having had artillery training, that the new LVTA was better suited to an artillery mission than a tank mission. Arriving at his base camp on Guadalcanal, he set about convincing people that his battalion should train in artillery-type duties. Lacking LVT-A4s he borrowed pack howitzers from the 15th Marines. Fire direction centers were established in the LVTA platoons and companies and at battalion level. When the provisional 3d Armored Amphibian Battalion was formed, the 1st gave them the benefit of its experience.

⁷Interview with LtCol L. Metzger, USMC.

Thus, with borrowed equipment and improvisations all along the line, the LVTAs, utilizing artillery forward observers, were ready to add their fires to those of the divisional guns. At Okinawa this training and foresight paid dividends. There the LVTAs of the 1st Armored fired 19,000 rounds in indirect fire missions alone and worked in close conjunction with the regular artillery units.⁸

At OKINAWA, too, the LVT3, powered by twin Cadillac engines and utilizing hydramatic transmission, proved superior to the LVT4, its ramped predecessor. This new machine, designed by the Borg-Warner Corporation, became the standard vehicle in the post-war Marine Corps. The LVTA5 which appeared shortly thereafter was the LVTA4 with a gyro-stabilized, power-traversed turret. This improved model, however, was not actually used in combat in World War II.

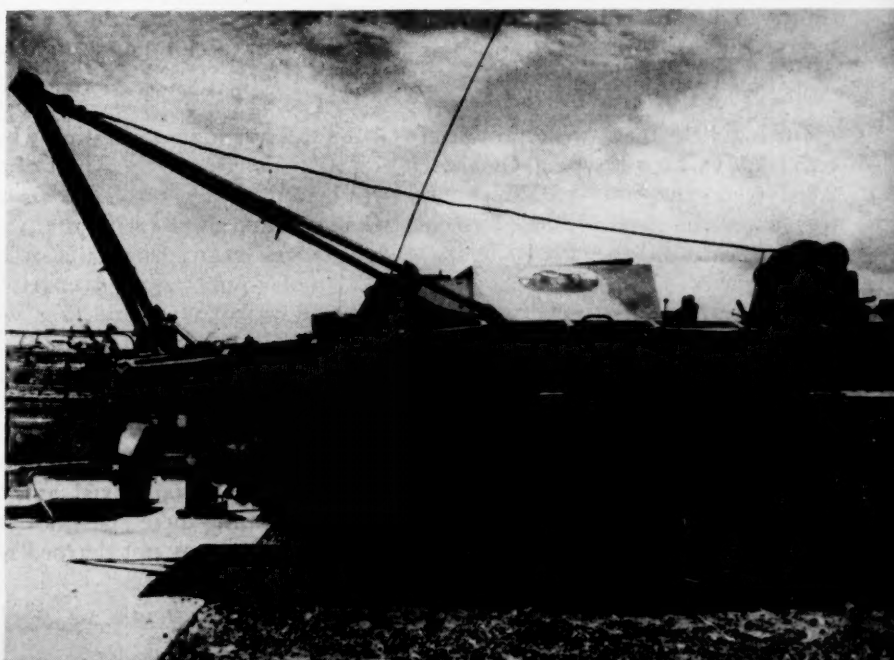
The story of the LVT in World War II is part of the story of the Marine Corps. The Corps may without dispute claim credit for initiating the development of this machine. However, the record would be incomplete without mention of the vital role played by Bureau of Ships of the U. S. Navy. That bureau, working in liaison with the Marine Corps, was the agency re-

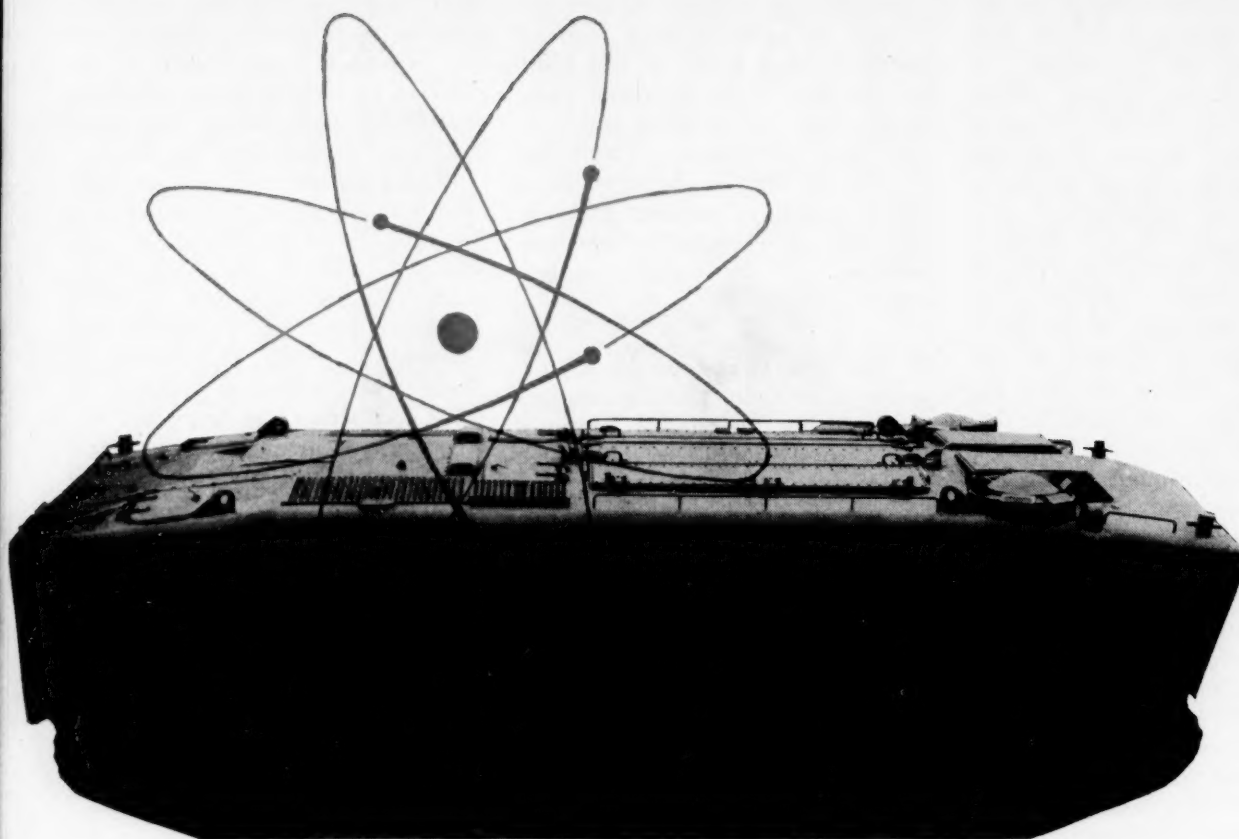
⁸Report of 6th Marine Division, Okinawa operation.

sponsible for the solution of technical problems and the mass-production requirements imposed by the expanded employment of the vehicles. In turn, civilian companies contributed their talents and facilities to the evolution of the LVT.

During the war each service benefited not only by its own experience but also by the experience of other services. The exchange of ideas, equipment, and know-how was never hampered by color of uniform nor shape of cap device. Thus, while the Navy tackled technical problems of LVT production, the Army and Marine Corps went on to solve tactical problems. Circumstances made it possible for the Marines to first use the LVT as a utility vehicle. Then, as the center of Marine activity shifted from the Southwest Pacific to the Central Pacific, it was natural that the role of the LVT should change from logistical to tactical. Tarawa was the first reef-bordered atoll to be attacked. The Marines had the job to do and the LVT was the only thing that could cross a reef; again circumstance paved the way for an innovation in technique. It appears equally natural that Marines should first have considered the uninterrupted movement of troops from ships to positions inland. The amphibious attack is a Marine specialty and the attention of many Marines has always been and continues to be devoted to its development. Utilizing large numbers of LVTs, the Marine Corps was

LVT2 — with winch for retrieving





LVT5 — offers protection against radiation, air bursts, and surf

in the best possible position to devise new techniques and improve old ones. As experience was gained they recognized that the LVT4 was better suited to an assault gun and artillery role than to a tank mission. Steps were taken to evaluate this revised function and the artillery role was found to be the most effective. The use of LVTAs as amphibious self-propelled artillery continues to be studied and expanded today.

The Post-war Period

During 1945 there were produced 6,259 LVTs of all types. Of these 2,862 were the new LVT3. Since the Army had standardized their procurement on the LVT4 model the majority of these LVT3s were destined for the Marine Corps. As mentioned before, some Marine battalions had used the LVT3 at Okinawa where it had been found superior in certain respects to the LVT2 and its ramped version, the LVT4. However, the majority of the new type vehicles were still in the United States. Further, there

were now in the Marine Corps and deployed overseas, a total of nine cargo LVT battalions and three LVT4 battalions. These were variously equipped with LVT2s, LVT4s, LVT3s, and LVT4As. In readying all Marine units for the assault on the Japanese homeland, a steady flow of machines to the Pacific was continuing. The abrupt end of the war thus found considerable stocks of LVTs of all types either in the hands of troops or accumulated in depot stocks.

THE RAPID demobilization which followed shortly after the end of the war withdrew from the Pacific the personnel required to maintain the vast stocks of impedimenta which had been assembled to support the invasion of Japan. In addition, with the reduction of naval forces, it became difficult to find shipping space to return to the United States large bulk items such as LVTs. Vehicles deteriorated in the tropical climate before they could be moved, and the costs of shipping these machines over great distances was not deemed eco-

nomical. Fortunately, many of the LVTs had been concentrated in Oahu where supervision and adequate storage was available. Eventually, when the Marine Corps reviewed its reserve stocks it found that there were on hand sufficient LVT3s and LVT4As to meet anticipated needs. Accordingly other types of LVTs, many of which were veterans of several operations, were disposed of as surplus.

With demobilization came a sharp reduction in research and development. Funds were limited and many projects had to be shelved. The Marine Corps and the Bureau of Ships decided that in spite of shortages LVT development should continue. Accordingly, work progressed on the development of improved components for LVTs as well as on the design of new type machines. Such work is both slow and costly and yields, superficially at least, few dramatic results. The main benefit of such labors, of course, lies not only in keeping a project alive, but also in having on hand a set of designs which in time of emergency can be



New models eliminate the mad scramble

quickly adapted to production. In the field of improved components perhaps the one item which enjoyed the greatest interest was the track system of the LVT. Considerable work was done to increase track efficiency particularly with reference to water speed. Of equal importance was the recognition of the fact that if the Marine Corps was to be called upon to again enter combat at some early date, the bulk of the equipment required would have to come from reserve stocks. Thus a review of the LVT3 and LVTA5 was desirable in order to determine whether these vehicles required modernization.

✱ A STUDY OF the LVT3 revealed that a major deficiency in the vehicle was its open cargo compartment. When passing through a surf the limited speed of the vehicle frequently made it impossible to avoid breakers. As a result water was shipped and in some cases vehicles were lost. Even if the sea or surf was moderate the vehicle rode low in the water and embarked troops or cargo were always wet. Lastly, in the event that a landing had to be made against resistance the troops in LVTs would be exposed to airburst fire; later the potential threat of an enemy atomic weapon attack increased even further the possible vulnerability of troops in an open LVT.*

To meet this problem, as posed by the Marine Corps, the Bureau of

Ships entered into a modernization program for the LVT3. In 1949, at Long Beach and San Francisco, California, all stocks of LVT3s were fitted with an armored cover. This cover was easily opened and did not interfere with cargo handling. In addition, a small turret with machine gun was fitted to the vehicle. The modified vehicle was then designated the LVT3c. Following the studies and modifications of the cargo LVT, similar investigation was conducted on the howitzer-carrying LVTA5. Here again the open basket turret was enclosed in an armored cover and the hull was modified to improve waterborne characteristics.

When the Korean conflict broke out the Marine Corps was able to

place in the field improved versions of both types of LVTs. Further, the Bureau of Ships had designs for completely new machines under development. In actual fact the Korean operation has required only limited LVT support. However, wherever they were used they paid their way. In the crossings of the Han River the Marine units embarked in LVTs, crossed the river, and proceeded to positions in rear of enemy strong points where they disembarked and rapidly forced the enemy to withdraw. Lack of bridges was no deterrent and enemy fire did not impede the crossings. In Korea the LVT-3c has emerged in the role of the armored personnel carrier. Cross-country, armored mobility has been provided to our units. The river as a barrier has been reduced in its importance. The LVTA5, continuing the mission first assigned at Okinawa, serves in an artillery role.

From reports on Korea and a brief look over present trends of thought elsewhere, it appears that the LVT will continue to enjoy an important function. New designs have heavier armor and mount larger weapons. Cargo types are improved in mechanical reliability, in speed, and in carrying capacity. The LVTA is being considered more and more as amphibious self-propelled artillery rather than as a reinforcement to towed artillery units. The cargo LVT, as an armored personnel carrier, fits into the new concept of landing situations dictated by use of atomic weapons. USMC



It's come a long way since its Florida swamp days

*Ed: See June 1948 issue of *Gazette* where this problem is first discussed.



By LtCol Thomas M. Coggins

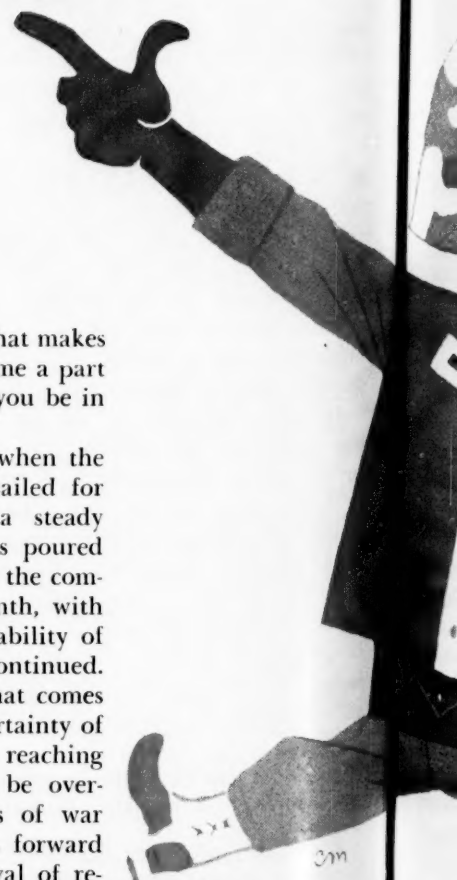
✻ SO YOU HAVE ORDERS TO REPORT to Camp Pendleton, California, for further transfer to the First Marine Division in Korea!

This sounds as if your future course of action is simple, that you will soon be on your way overseas. But wait, let's not be in too much of a rush. There are many things to be done and lots of time yet to spend in the U.S.A. You are about to embark upon your most complicated tour of duty. You are in the replacement mill, which has to grind along a regular pattern before you ever report to your commanding officer in his forward command post somewhere in Korea.

Let's take a look into the workings

of the replacement mill. What makes it tick? How did you become a part of it? And how long will you be in it?

From September 1950, (when the First Replacement Draft sailed for Korea) to the present, a steady stream of replacements has poured from Camp Pendleton into the combat zone; month after month, with the regularity and dependability of clockwork, this flow has continued. The morale factor alone that comes with the knowledge and certainty of replacements continually reaching the fighting front cannot be over-emphasized. The fortunes of war may shove the battle lines forward or backward, but the arrival of re-



placements remains always the one constant which in turn means eventual rotation home. With that fact in mind, even the driving cold of Korean winters or the mud or dust of summer fade into merely a thing to be endured, for "I won't be here forever!" is the comment that comes true every month as the shipload of replacements arrive.

☛ ASSUME IT IS NOW June and your orders say that you are to report to Camp Pendleton by July 28 as a September replacement. You want to know why you have to hang around Pendleton for a couple of months instead of going right on out to Korea. Here's why—

All officers below field rank must receive training prior to assignment overseas. Sure, you know your job,

but do you know your *infantry*? Basically, every Marine is an infantryman and you are included. What do you know about survival in extreme cold weather? Are you in condition to lead a charge up the slope of a steep hill? When was the last time you actually handled troops? Are you ready to be a leader? Maybe! Let's not take a chance.

"So," you say, "maybe Pendleton has a purpose, but how long will I be there before I can go overseas? Is that September embarkation date accurate, or could I depart sooner or later than that? I'd like to take my family out to California if possible and I need to know the score."

Since you are a September replacement, you will, under ordinary circumstances, leave for overseas the latter part of September. That, bar-



Headed for Korea? Stop and read this — there's much to be done before you pack your seabag

ring unforeseen developments, is fairly definite. As far as your family is concerned, it is best that you see them safely to your home of record and say your fond farewells until your eventual return from Korea. Housing at Pendleton is practically non-existent. If you find even a "cracker box" for under \$100 a month, you were raised on a rabbit's foot and you belong in Las Vegas, not the Marine Corps! And, too, your children won't recognize you when you reach home at night from your training area.

Yes, I said *training*.

You report to the post adjutant at Building 24-A-1 at Camp Pendleton. There you receive the information that from now until your departure in September you will be training for eventual assignment to the First Marine Division. You are one of a large number of officers and men scheduled to depart for Korea at the same time; Headquarters Marine Corps has already, months before, decided upon the number and specialty of those to go overseas during September.

Camp Pendleton has a number of units whose purpose is to accomplish its training mission; you will join one or more of these units during your stay.

All right now? This is the picture. You report to the post adjutant (if you are an officer) or to the Receiving and Casual Battalion (if you are enlisted). You are transferred out to Tent Camp Two to the Second Infantry Training Regiment or to Staging Regiment, depending upon the amount of training you are scheduled to receive. If you are join-



You spend six weeks in the boondocks

ing after recruit training, you go first to the infantry training regiment where you spend the next six weeks hiking over hill and dale, learning demolitions, heaving grenades, running combat courses, and learning how to use your weapons. You learn combat at night and offensive and defensive tactics. (Artillerymen, tankers, and amphibian tankmen spend only two weeks here, then take four weeks special training in the Supporting Arms Training Regiment.)

Then comes the day when you find yourself joining Staging Regiment to which replacements from posts and stations have gone directly. The functions of this regiment require elaboration since it is new to most of us. Staging Regiment was born on August 22, 1951 and consisted at that time of only an H&S Company. Trainees, officer and enlisted, upon joining the regiment would be organized into a replacement draft. The draft commander, a replacement himself, was usually a lieutenant colonel. He would select his staff and designate company commanders from the draft officers.

To provide continuity and to ease the task of the draft, the Staging Regiment assigned a "liaison team" of two or three officers and six to twenty enlisted men to assist the commander in keeping proper records, rendering reports and unit diaries, and accounting for supplies. This team would accompany the draft overseas then return to pick up another draft.

The liaison-team system outlined above continued until July 1952 when it was superseded by the replacement battalion, thus ending the numbered-draft system. The First Replacement Battalion took the July 1952 replacements to Korea to inaugurate the new program.

The replacement battalion differs from the liaison team in many im-

portant respects, but chiefly in that the old draft commander, who was himself a replacement and new to the system, is replaced by the commander of an organized battalion. He is a member of the permanent personnel of Staging Regiment and as such returns to Camp Pendleton just as did the old liaison team. The latter has become a battalion staff nucleus which, when augmented by replacement officers and enlisted men, completes final processing of all replacements.

Staging Regiment now consists of an H&S Company and three replacement battalions, each rotating the delivery of replacements to Korea.

As personnel are received by Staging Regiment they are assigned to that battalion which conforms to the individual's basic orders. For example: you are a September replacement so you join the Third Replacement Battalion, which is due to sail during the latter part of September. If your orders had said "October Replacement" you would go to the First Battalion.

The permanent organization of the Replacement Battalion allows for six officers and ten enlisted men. The mission of this unit is to provide command, administrative, and logistical control of replacements during the final period of administrative processing, embarkation, and transit overseas to the point of debarkation in Korea. Since the above-mentioned permanent personnel are insufficient for organizing and processing the battalion, fifty-eight officers and sixty staff NCOs (all replacements scheduled for Korea) will be ordered to report to Staging Regiment by the 24th of the month preceding their departure for overseas. The officers will serve in executive and special staff billets and as company officers of replacement companies. The staff NCOs will serve



You brush up on all weapons

as first sergeants and platoon sergeants for the companies as they are formed.

At Staging Regiment, during the period October through February of each year, replacement officers below the rank of colonel and all enlisted replacements will receive cold-weather survival training at the Cold Weather Battalion operated by Marine Barracks, Camp Pendleton.

Staging Regiment conducts the final processing of trained replacements prior to overseas assignment. It is here that a final check is made to assure that each individual is in all respects ready for the First Marine Division. Final checks for eligibility include: a thorough examination of all service record books and the screening out of all over-age and under-age personnel, Korean veterans and those who have received two Purple Heart awards, dependency and hardship discharge or humanitarian transfer cases, and sole survivors and conscientious objectors. It is also insured that all replacements are administered the required

properly instructed in their use.

All personnel are given the existing regulations regarding movement of dependents, and, where applicable, sufficient copies of orders are furnished personnel for the transportation of dependents and household effects. In addition, advance pay for personnel desiring it is arranged.

It is insured that each replacement has the minimum quantity of clothing, equipment, and arms for overseas, and that he does not take aboard ship more than the allowable baggage for his rank.

While in Staging Regiment, replacement personnel will also zero individual weapons and maintain physical conditioning in conjunction with staging and final processing.

Just what is meant by that very nebulous term "staging and final processing?" Let's try *processing* first.

For a formal definition, processing is that procedure employed to accomplish the joining, orientation, screening, immunization, dental treatment, rifle zeroing, and neces-

Now let's touch on *staging*.

Staging refers to the preparation and assembly, movement to the port of embarkation, loading aboard ship, voyage overseas, and final delivery of the replacements to the First Marine Division. Field officers are normally excluded; they proceed via air transportation direct to Korea, while officers below field rank usually travel via surface transportation.

The preparation and assembly phase of staging covers the period from the end of processing to the assembly of all companies in a staging area preparatory to the movement to the port of embarkation. It includes the final inspection of the battalion to assure readiness for combat, a parade and review before the commanding general of Marine Barracks, and organization of a "voyage staff" for the shipboard phase. Each individual is inspected to assure that his clothing and equipment are complete. Rehearsals are conducted to assure prompt loading of buses, bus commanders are appointed, and all hands stand by for the big day when



You shake hands with cold steel again

inoculations, have necessary dental work accomplished, and have been examined for physical fitness for duty in Korea; that all Records of Emergency Data (DD Form 93) are up to date, that the subjects of allotments, insurance, wills, and powers of attorney have been explained, and that personnel have had ample opportunity to execute them; that all needed identification cards and tags have been checked and issued; and that all personnel have sufficient "change of address" cards and are

sary administrative matters preparatory to assignment of replacements overseas. All the items previously mentioned come under the heading of processing. Of all, perhaps the most important is the Service Record Book check in that this is the final act which determines whether the individual is eligible for overseas duty. It also affects the morale of the individual in that incorrect information on allotments and emergency data pages can cause a great deal of grief and anguish.

loading will commence.

The movement phase begins with an early reveille and breakfast on the morning of M-day. Companies muster, then split into bus teams which are marched by the bus commander to the designated loading points determined during the rehearsal. The buses arrive and loading commences. As the dawn breaks, the buses move off and the first serial, usually consisting of advance party companies containing cooks, butchers, bakers, messmen, and guard details, is on its

way. The officers of the advance detail have already preceded their unit and are meeting the ship "in the stream" along with the pilot in order to have time to become properly oriented prior to the ship's berthing.

Buses from nearby Marine and Navy installations usually comprise those transporting the second (and largest) serial. After they depart, the buses return from delivering the first serial and load the third, and last, serial. Battalion records and supplies then go aboard trucks, and the last signs of the battalion disappear as it departs for the port of embarkation.

The loading phase begins with the arrival of the first serial at shipside. The battalion billeting and embarkation officer has determined the order in which compartments are to be filled, and as the companies debark from the buses they form in alphabetical order to board the ship. As individuals pass the check-off table, they are given mess cards (by compartments) and are checked on the embarkation roster. Guides lead them to their compartments where compartment commanders assign them to bunks. Within fifteen minutes the first serial is aboard.

Meanwhile, the stevedores have opened the ship's hatches and working parties have begun to load seabags and cold weather duffel bags into the holds.

The air replacements arrive by train from El Toro, and all hands then await the loading aboard of the last seabag, which usually occurs by 1600. Now the voyage phase begins.

The voyage phase is a responsibility of the Military Sea Transportation Service, whose ships fall into two categories: (1) Vessels of the U.S. Navy which belong to NTS; (2) Civil Service-manned ships (USNS), in most cases former ATS vessels. Usually, the USNS transports provide the transportation for replacements. These transports may be described as "austerity troopers," or transports operating under wartime conditions and lacking the niceties of accommodation and services. Austerity troopers, according to the policy of the Department of Defense, are fitted to furnish only the basic needs of troops embarked and are considered adequate for that purpose. Troops are berthed in bunks

three tiers high within compartments.

While on the voyage phase, let's digress a moment to discuss the voyage staff which is a temporary organization comprising officers and enlisted personnel of the embarked battalion. This staff is responsible for the organization and administration of troop details, for the enforcement of all regulations governing military passengers, and for the discipline of troops. All these matters are simplified in that the battalion commander is also commanding officer of troops. The voyage staff administers and supervises the details required for police, sanitation, guard, and messing of all embarked troops. The troops perform all of these services required during the voyage except the preparation of food, and even in this they provide additional cooks and bakers as required. There are no personnel available on board ship to perform any of the services enumerated for embarked troops. When several units (casual or organized) of the various Armed Forces are embarked, passenger officers of those branches of the Armed Forces are appointed as unit commanders for their own service components.

Training schedules must still be published and training continued to the maximum extent consistent with shipboard conditions. Training films provide most of the instructional material, while small group lectures and demonstrations are usually the only feasible methods of instruction. Rifle inspections and calisthenics are daily requirements, and daily inspection of compartments, heads, and weather decks and, naturally, the preparations for this inspection, require constant expenditure of much time and effort by all troops.

Another part of the voyage phase is the stop-over in Japan to debark the air element. This is usually accomplished in a period of four hours or less but if the ship remains overnight or for several days, liberty and shore leave may be granted to personnel.

If liberty is granted in Japan, it probably will expire nightly at 2400; the uniform is khaki or greens, as dictated by the weather. All non-military eating and drinking establishments which do not display a

Class "A" sign are "off limits."

One other item has been taken care of prior to the battalion's arrival in Japan: the collection of all United States currency so that it may be converted to military payment certificates, the only authorized currency for use of American nationals in post offices, exchanges, military clubs, and military cafes in the Far East. The possession of United States currency or coins in the Far East Command in any denomination greater than pennies constitutes an offense punishable by court-martial. In business dealings with the Japanese, only yen may be used as legal tender. Yen, once purchased, cannot be re-converted to military payment certificates under any circumstances, nor can it be used in Korea.

While the ship is in Japan, the officer courier who has preceded the battalion by air transportation, has reported to the First Marine Division, obtained assignment rosters indicating the units to which replacements are to be assigned, and now rejoins the battalion.

Debarcation drills, with the officers and men going to debarcation stations according to their division assignments, are held while the battalion is en route from Japan to Korea. Service Record Books are closed out and final unit diaries prepared. Then, with the arrival of the ship in Korea, the voyage phase comes to an end.

Delivery begins with the commencement of debarcation in Korea. LCVs carry the troops from shipside to the beach where trains and trucks await to transport them to the forward area.

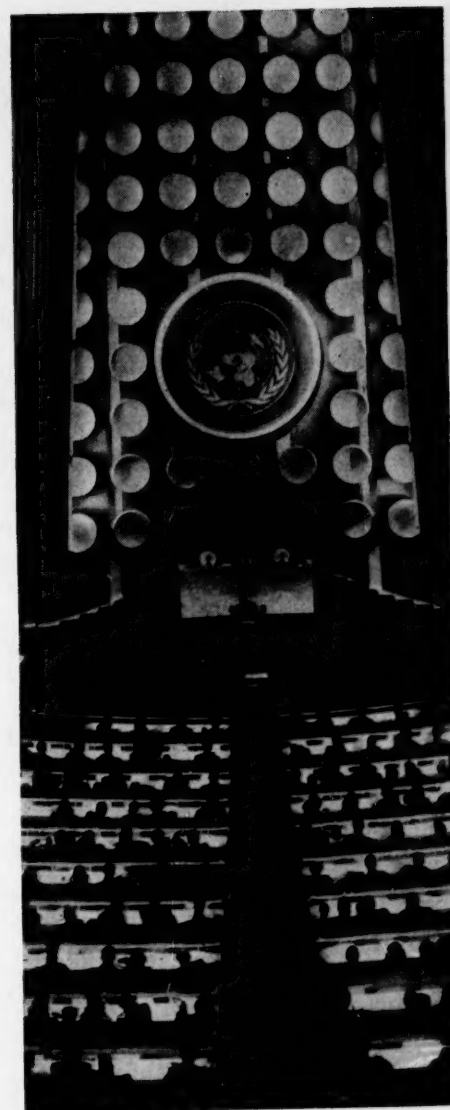
Your trunks and seabags will not be seen again until it is your turn to be rotated to the U.S. With your pack upon your shoulders and your weapon and cold-weather clothing duffel bag in hand, your tour of duty in the Far East Command has begun.

From the time you received your initial orders to this final day, your every step has been planned and you have only to hear the glad yells of those rotatees awaiting your arrival to know that the plan has been a good one.

Perhaps a year from now you will be the one welcoming the arrival of another ship with the cry, "Replacements are coming!"

USMC

an Armistice can work



United Press

*Palestine proved that the peace of
the world can be made easier . . .*

Wide World

... if workable armistice agreements pave the way

By Col Lewis C. Hudson

☛ WHETHER THE DIFFERENCE OF opinion exists between two small boys fighting in the street, several native tribes arguing over hunting areas, or great nations involved in a global conflict, conducting an armistice is always a difficult and delicate procedure.

Interest in the past two years has centered around the table at Panmunjom, but there is yet another armistice which was successfully negotiated and which has been functioning for some time—Palestine.

In 1948, the United Nations sent a group of U. S. military observers (including Marines) to Palestine. Since then we have been concerned intimately with the working of an armistice in that area.

Under LtGen Riley, USMC (ret), Colonels Ballentine, Hudson, Vadnais, and Taxis served as chairman on one of the mixed armistice commissions at which Israel and her Arab neighbors discuss their incidents. (LtGen Riley recently resigned his post.)

Numerous Marine enlisted men have served as observers, drivers, and maintenance men on the commission, in addition to the officers of the Corps who are with the international group. All in all, it has been a heterogeneous crew that served the United Nations. For example—the Israeli-Jordan MAC (Mixed Armistice Commission) at the time I was chairman contained a U. S. Army lieutenant colonel, a Belgian captain, a French captain, and a U. S. Marine staff sergeant as observers. An English girl served as stenographer, and the driver-mechanic was a Marine corporal.

These people, plus the two Jordan and the two Israeli members, investigated and acted upon armistice violation reports for Jerusalem and the border between Israel and Jordan. They gained a close acquaintance with many of the working aspects of an armistice.

Usually one thinks of an armistice as a cessation of hostilities for the purpose of discussing and agreeing on terms of a close-following peace. In the area of old Palestine, an armistice has existed now for more than four years, and how long it may extend into the future is unknown. Thus, in many ways this armistice is providing the means for continuing relations between nations.

There are important distinctions between an armistice, which is a cessation of hostilities, and a peace agreement. The armistice can be likened to a ball game, temporarily halted on account of rain. Both teams stay on the field, and the game may be resumed anytime. The peace agreement is like the end of the game. A decision has been rendered and both teams go home. There may be another game tomorrow, but at the present time that particular game is over. For an example, let us consider the Jordan-Israel general armistice agreement.

This agreement sets forth certain principles. One, for instance, stated that each party would respect the injunction of the Security Council against resorting to force in settling the Palestine question. It was agreed

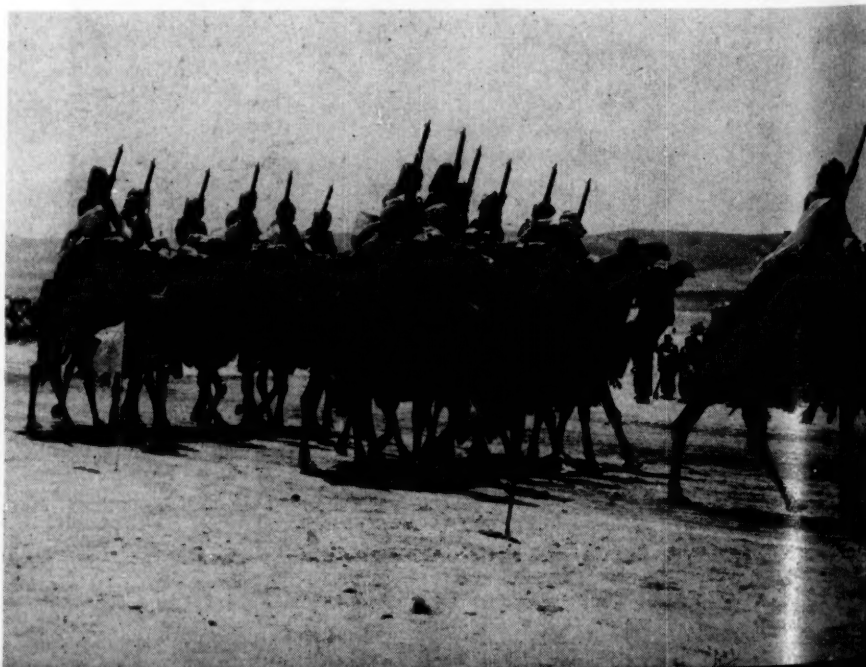


Wide World

Jerusalem peaceful once more

One side of the table—Trans-Jordan forces

Wide World



that the armed forces of both parties would not plan or threaten aggressive action against the people or the armed forces of the other party.

It was stated further that, "No element of the military or para-military forces of either party (including non-regular forces) shall commit any warlike or hostile acts against the other . . . or against civilians in territory under control of that party . . . or shall advance beyond, or pass over . . . the armistice demarkation lines."

Events have demonstrated that these principles have been observed as far as major military forces are concerned. However, experience has shown that we should use more caution when writing restrictions into future agreements. Although the written agreement appears iron-clad, there are still holes in it.

For instance—one of the parties of the dispute could designate a number of its military personnel as police. These police, not being members of the armed forces, then could cross the armistice demarkation line to establish control over an area, or to carry out acts which would definitely be aggressive if regular armed forces had committed them. In like manner, armed bands of civilians could cross the line, cause an incident, and get back without specifically violating the agreement.

Another principle set forth is that "no military or political advantage should be gained under the truce." This one point has caused many long and inconclusive arguments such as whether or not this principle is violated when one side increases its military strength. There have been many other controversial questions raised by the inclusion of such a broad principle.

None of us who worked with the armistice demarkation lines set forth in the agreement will ever forget their importance in the future. Originally these lines were drawn on a small-scale map at Rhodes. When attempts were made to place these lines on the ground itself, all kinds of difficulties arose. Dwellings were separated from farm lands, villages were separated from water sources they had used for centuries, and in some cases the lifetime holdings of hundreds of people were wrenched from them with the stroke of a pen.



Wide World

Israeli troops—the new nation fought in an old land

Some adjustments were made to re-unite families with their homes or farms, or to re-settle them. However, the hardships inflicted upon thousands of people can be overcome in only one way—by tracing the demarkation lines on the ground first, and then transferring them to a map. Time spent in laying out demarkation lines will reward those who take the trouble by removing causes of complaints which would otherwise continue to fester for years.

❖ THERE WERE other traps. In one case the armistice agreement contained the following restrictions—"Rules and regulations of the armed forces which prohibit civilians from crossing the fighting lines or entering the area between the lines shall remain in effect." It was simply stated, but difficulties arose. When it came time to use this provision in settling a dispute before the MAC, it was found that neither party could produce a rule or regulation of the armed forces relating to this subject. The difficulties and negotiations that arose could have been avoided had they been anticipated in the original document.

The agreement contains rather broad statements on procedures to be used. It was stated—"The MAC shall formulate its own rules of procedure."

Statements such as these are a wide-open invitation to hours of debate on procedural questions. The parties in this instance finally were

satisfied when the chairman produced a volume of Roberts' *Rules of Order* and the rules of procedure adopted for use by the U. N. General Assembly. From these we made adaptations to fit our problems. This was a fortunate improvisation that stopped all future arguments from this source.

For those who can foresee their involvement with any aspect of drawing up an armistice agreement, help may be obtained by browsing through the articles of the present agreements in old Palestine. By examining each paragraph with a critical eye, adopting that which is pertinent and easy to read and rejecting that which is obscure, a practical agreement could be drafted.

Anyone who is called upon to negotiate an armistice could profit greatly by a study of those now in operation in the Middle East. In order to avoid misunderstandings in the future, it is necessary that the demarkation lines outline those terrain features on the ground which will be evident for years to come—these lines may become permanent borders in the future in spite of present intention.

Generalization should be avoided. Specific language is necessary in laying down the conditions of an armistice. Clarity in language in these negotiations is as necessary as it is in a field order.

The peace of the future will be made easier if workable armistice agreements prepare the way. USMC

passing in review

BOOKS OF
INTEREST TO
OUR READERS

Escape . . .

THE COLDITZ STORY—P. R. Reid, 288 Pages. Philadelphia and New York: J. B. Lippincott Co. \$3.95

This is a story of Colditz Castle and the men of many nationalities taken prisoner of war by the Germans, the lives they lived while in prison, and their efforts to escape from a prison the Germans considered escape-proof.

Colditz Castle, a grim, grey pile of rock a thousand years old, situated in the heart of the German Reich, is the setting for the tale of suspense and adventure.

The Colditz Story is a true story as lived by one of these prisoners of war. Mr. Reid, a British officer serving in France, was captured by the Germans in the Spring of 1940 and imprisoned at Laufen, a prison not far from Salzburg.

Reid and some of his companions attempted to escape by digging a tunnel with an exit outside the walls of the prison. They were successful, but five days after they escaped all were recaptured.

This unsuccessful attempt earned Reid and his companions their transfer to Colditz, the prison for officers who were confirmed escapees or offenders from other camps.

How these prisoners conceived escape methods, made German army uniforms, insignia, buttons, and false papers, and kept them hidden from the Germans' frequent searches of their barracks is an amazing tale of man's ingenuity.

The British contingent made Reid officer-in-charge of escape activities. In this capacity, he engineered all escape attempts conducted by his contingent. Unfortunately, while serving in this capacity he could not participate as an escapee. Finally, he resigned this position and worked out an escape plan that was so obvious that it had never been attempted before because it was thought to have little,

if any, chance of success. This suspense-packed escape was successful and the author managed to reach Switzerland after a thrilling journey through Germany.



The story is not confined to Mr. Reid's attempts to escape; it also reports the successful and unsuccessful attempts made by officers of other nationalities, such as the Dutch, Poles, and French. The book deals fully with the life of a prisoner of war and his daily routine, has its humorous side, and should keep you on the edge of your chair.

Reviewed by LtCol Robert K. McClelland

Jungle War . . .

THE CAMPAIGN ON NEW BRITAIN—LtCol Frank O. Hough & Maj John A. Crown. 220 pages, illustrated. Washington: U.S. Government Printing Office. \$3.75

It's been almost ten years since the 1st Mar Div gave up its tenure of rest and rehabilitation and the hardened veterans of Guadalcanal moved from Australia to New Britain.

The narrative picks up the division as it moves into the staging areas. The reasons for the campaign are developed as well as the background of Allied and Japanese strategy of that period. It is shown how a landing on Cape Gloucester could isolate the Japanese bastion of Rabaul.

To the Marines in the assault waves, Cape Gloucester was shrouded in a cloud of mystery with the Japanese waiting in the jungle to push them back into the sea. To the American public at home, New Britain was just another island-hopping campaign, overshadowed by such spectacular events as Tarawa and the Army Air Force's successes over Germany.

The authors make it clear that New Britain was a battle that ranks with any in the annals of the Marine Corps. From the initial landings

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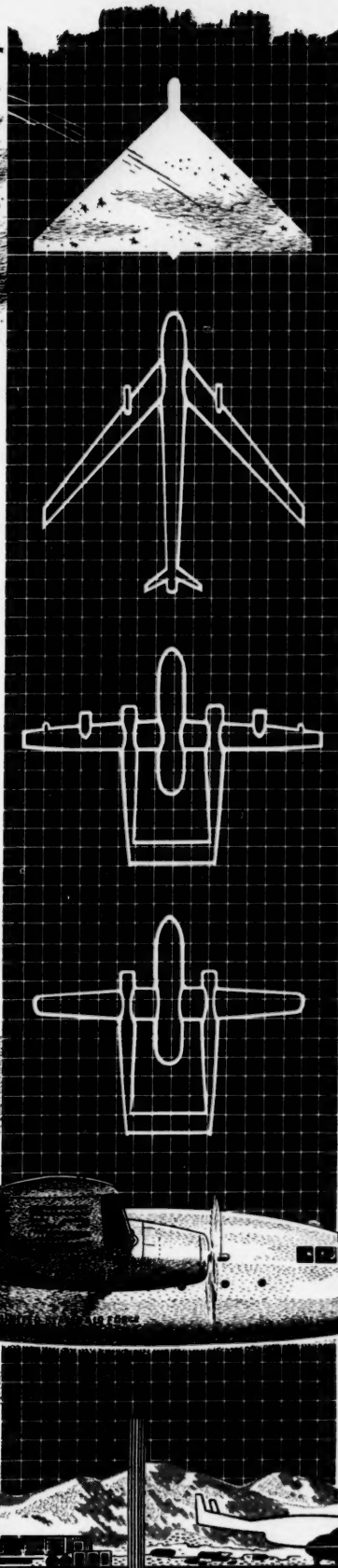
THE FUTURE TAKES SHAPE...

at Fairchild

The future taking shape at Fairchild goes far beyond airplane design. Design today is just a starting point—the Fairchild concept is a complete transportation system fitted to the huge needs of tomorrow. Delta-wing cargo carriers of great capacity, with loading and unloading principles as unusual and practical as the design of the C-119—are coming off the drawing boards. Fairchild—long the pioneer in load-lugging airplanes—is applying its unequalled know-how in developing, at its own expense, new strategic and tactical transport systems bringing into being new and unique land and air vehicles.

These aircraft are taking shape exactly as the famous "Flying Boxcars" grew from an idea to a reality and for the first time provided the Air Force with an "air truck." C-119 cargo carriers designed as work horses came off the drawing boards with these practical features... an unobstructed boxcar size cargo hold open at one end for easy loading and unloading—keeping an airplane where it belongs, in the air and working for a living... short take-off and landing characteristics built to get into and out of rough landing fields, built to drop complete trucks, bulldozers or pieces of artillery by parachute—all for OVERALL lowest "cost per ton-mile." From the Berlin airlift to Korea, in Africa and Labrador, Greenland and Alaska, the Flying Boxcar's range of accomplishment stands as staunch proof of its fitness.

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to recognize more and more the benefits to be derived from United Services' complete low-cost, non-profit insurance program *exclusively* for armed forces officers. Of the more than 145,000 commissioned and warrant officers enjoying the protection of this 31-year-old institution, more than 7000 are in the Marine Corps. Insurance coverage at minimum cost on automobiles, household and personal effects is available through United Services Automobile Association in Japan, Western

Europe, Puerto Rico and the Philippines, as well as in the States. Claims are quickly settled, even in the most out-of-the-way places. Your USAA is an organization of commissioned and warrant officers who pool their funds for mutual protection. Over the years, this plan has resulted in consistently large savings for members. In 1952, \$3,200,000 dividends were returned to USAA policyholders. Take advantage of this sound, non-profit insurance plan, NOW! Save through membership in the USAA. Fill in the coupon and mail it TODAY!



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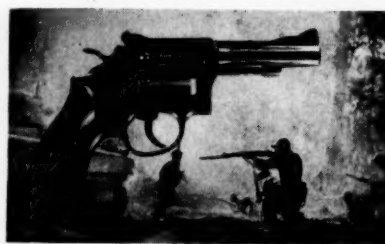
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and first fierce encounters with the Japanese and the elements, to the long drawn out actions that are covered by the misnomer "mopping up," the Marines fought a tough, gruelling battle. The many photographs illustrate the hardships of war in the jungle.

To the student of small unit tactics, the book is an invaluable source of reference material. The detail and description of every small or local action is extremely fine and accurate. The many excellent situation maps enable the reader to follow the fighting in detail. The overall plan for the neutralization of the island is covered equally well. An insight into the movements of the Japanese is also recorded.

Lastly, it is an extremely well-written book and will appeal to the casual reader. The start is slow and perhaps awkward, but such things as orientation and background are always necessary even though sometimes tedious. The strength of *The Campaign On New Britain* lies in the fact that it presents an absorbing story by staying within the realm of historical facts.

Reviewed by 1stLt J. W. Hammond, Jr.

Upstairs Maid . . .

VIEW FROM THE AIR—Hugh Fosburgh. 295 pages. New York: Charles Scribner's Sons. \$3.50

The story centers around a bomber crew, picking them up in civilian life and steering them through a tour of combat in the South Pacific in a B-24 bomber known as the *Upstairs Maid*.

The pilot, Lt Gibson, is a young writer who feels the war may pass him by; Flight Officer Lovely is a green country boy capable of being a co-pilot but never quite sure enough of himself to be a pilot; Mike Luca is the conceited bombardier; and Chester Biggers is the useless navigator.

The book is written on the theory that "all work and no play makes Jack a dull boy." The crew, except Chester Biggers, has many hilarious times on leave. The flights and liberty parties are so well described that one feels that the author must have been one of the crew members.

There are many anxious and exciting moments, such as the time the



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Upstairs Maid is shot up by Japanese planes and Lieutenant Gibson takes complete command, nursing the two remaining engines, ordering the crew to throw out guns, ammunition, parachutes, radios—anything and everything that will ease the load. They even cast a wary eye at Chester Biggers.

Also exciting is the time a terrific thunderstorm is encountered and all the crew members figure this may be their last mission. The book describes each member's reaction in a very dramatic way. The author has done a remarkable job of capturing the feelings of the crew.

The average person will like this book, and airmen and ex-airmen will get even more enjoyment from it.

Reviewed by Maj William D. Armstrong

Air Pioneer . . .

MY BROTHER BILL—Ruth Mitchell, 344 pages. New York: Harcourt, Brace and Co. \$4.00

Any discussion of the origins of military aviation in the United States will very quickly include the name

of William Mitchell. In the search for personalities who have influenced the rise of this powerful arm, he immediately comes to the foreground. For his work alone General Mitchell would be well known. But, involved as he was at a spectacular public court-martial, his name enjoys an even wider fame than would normally be attributed to a military professional.

Gen Mitchell believed so strongly in the role of aviation as a weapon that he sacrificed his career in order to awaken conventional thinkers to the vast implications of this now accepted arm. His story has been told by many. Now Gen Mitchell's sister, Ruth, takes pen in hand to give a more intimate portrait of the man.

My Brother Bill devotes fully half its length to events before World War I. Ruth Mitchell reveals her brother through the eyes of a young and adoring sister. As such the personality of the man is perhaps somewhat over-emphasized but not to the detriment of the book. She does not attempt to analyze his actions nor does she presume to interpret events when her information could not be in much greater detail than is already publicly available. Her story is simple and well told. Gen Mitchell's life is fascinating even if the post-war period were excluded. The narrative of his adventures in Cuba, the Philippines, and Alaska furnishes much pure entertainment.

Readers interested in Gen Mitchell's professional activities and opinions should turn to other sources for this data. *My Brother Bill* is a biographical sketch presented in much the manner that one member of a family would speak of another to interested friends. It is an entertaining story told in an informal manner.

Reviewed by LtCol V. J. Croizat

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The following rules will govern this competition:

(1) Essays awarded "Prize" or "Honorable Mention" are for publication in the Marine Corps Gazette. Essays not awarded a prize or honorable mention may be published at the discretion of the Editorial Board, and the authors of such essays will be compensated at the rate established for articles not submitted in competition.

(2) Essays should not exceed 5,000 words.

(3) All essays must be typewritten, double-spaced, on paper approximately 8½" x 11", and must be submitted in triplicate, each copy complete in itself and firmly bound together.

(4) The name of the competitor shall not appear on the essay. Each essay heading must contain an identifying phrase consisting of the last five words of the essay, in addition to the title. This phrase shall appear:

(a) On the title page of the essay

(b) On the outside of a sealed envelope containing the name (rank and serial number, if any) of the competitor.

(c) Above the name and address of the competitor, inside the envelope containing this identification.

The envelope containing the author's identification will not be opened until winning essays have been determined. Essays and identifying envelope must be mailed in a large sealed envelope marked "Prize Essay Contest Group I, II, III" (as appropriate) to the Secretary-Treasurer, Marine Corps Association, Box 106, Marine Corps Schools, Quantico, Virginia.

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